

IOWA UTILITIES BOARD
Policy Section

TO: The Board

FROM: Parveen Baig

DATE: May 16, 2012

SUBJECT: Docket No. NOI-2011-0002: Board Inquiry on High Voltage
Transmission Projects

ACTION REQUIRED: Need Board Order Scheduling a Wrap-up Workshop

I. Background

On August 16, 2011, the Utilities Board (Board) issued an order opening an inquiry on high voltage transmission projects and soliciting comments. The inquiry was designed to gather information regarding planned major transmission projects as well as to receive comments from stakeholders to assist policy makers. The initial questions were for the proponents of various transmission projects. After the initial comments were filed, other interested stakeholders were given an opportunity to provide additional information they believed was relevant to the inquiry. The Board indicated that comments may include policy recommendations to the Board.

On October 3, 2011, comments were filed by Iowa Association of Electric Cooperatives (IAEC), MidAmerican Energy Company (MEC), ITC Holdings Corp. (ITC), Rock Island Clean Line LLC (Clean Line), and Wind on Rails Inc. (WOR).

On November 3, 2011, comments were filed by Ag Processing, Inc. (AGP), Iowa Association of Municipal Utilities (IAMU), Interstate Power and Light Company (IPL), Wind on the Wires (WOW), Iowa Office of Consumer Advocate (OCA), Missouri River Energy Services (MRES), The Environmental Law & Policy Center and Iowa Environmental Council (Environmental Group), Resale Power Group of Iowa (RPGI) and Midwest Independent System Operator (MISO). Late filed comments were accepted from Iowa Chapter of the Sierra Club (Sierra Club).

On November 4, 2011, the Board issued an order soliciting reply comments.

On December 3, 2011, reply comments were filed by: MEC, MISO, IPL, Clean Line, and WOW.

The Board order initiating the inquiry asked all proponents of transmission line projects 50 miles or more in length and 345 kV or above to provide certain information outlined in ten questions pertaining to issues such as proposed transmission project size, location, financing, reliability impacts, status in regulatory processes and status in regional transmission organization process. A list of the questions is provided as Attachment A.

A detailed summary of comments is provided in Attachment F. As an aid to the reader, a list of acronyms used throughout this document is included as Attachment G. The remainder of this memo provides inquiry goals, highlights of inquiry responses with staff analysis, and staff recommendations.

II. Inquiry Goals

In its order initiating the inquiry, on page 4, the Board stated that:

The Board is initiating this inquiry to gather information regarding planned major transmission projects. The inquiry is designed to gather this information, along with comments of other stakeholders, to assist policy makers.

On Page 3 of the Order, the Board stated that:

The Board is interested in potential Iowa rate impacts and how the projects may reduce transmission congestion in Iowa, improve delivery of low-cost generation (particularly wind generation) to market, and impact reliability of transmission service.

The Board is also interested in learning how (or if) the proposed projects interact, overlap, or serve the same purposes, and whether some projects are mutually exclusive. In addition the Board wants to find out if the timing of some projects is impacted by the timing of other projects. If data or information provided in response to the inquiry questions is dependent on the timing of other projects, these assumptions should be clearly stated. Also, if there are impediments or incentives (regulatory or otherwise) that could deter, adversely affect, or benefit a particular proposed project, these should be identified.

In essence, the main goals for the inquiry were to:

- Gather information on specific projects that were being developed in Iowa by various utilities and independent developers, including the impacts of the projects; and
- Receive comments from stakeholders on transmission-related policies.

III. Highlights of Inquiry Responses and Staff Analysis

Summary of Specific Project Information

MEC, ITC¹, Clean Line, and WOR provided information regarding their proposed projects in their filings. A summary of specific project information filed by various commenters is provided in the following table. Additional comments were added from the 2011 MISO Transmission Expansion Plan (MTEP2011) report that was filed by MISO as an Exhibit in this docket and other publicly available documents. The use of these documents is noted in the table as staff updates. Publicly available documents were also used as sources for some of this memorandum's Attachments.

This table is followed by staff's discussion of the process used by MISO to develop Multi Value Projects (MVPs),² a short summary of the analysis conducted by a group of Midwest utilities to develop the Midwest Power Transmission Line (Midwest Line), and the development of Green Power Express (GPE) by ITC.

Clean Line has completed an economic analysis for its project. Clean Line and WOR have not completed transmission studies for their projects.

¹ ITC Midwest (ITCM), a subsidiary of ITC is developing transmission projects in Iowa.

² MVPs were developed as part of MISO's MISO Transmission Expansion Planning Process

Project Name And Description	Sponsor	RTO Process Status	Reliability Issues	Capital Costs (\$2011) Million	Regulatory Approval Status
<p>Combined Iowa MVPs (MVP #3 and #4)</p> <p>Includes 345 kV lines, switches, and transformers, and may include 161 kV upgrades</p>	MEC and ITCM	<p>Approved as part of MVP portfolio.</p> <p>Initially part of Regional Generation Outlet Study (RGOS)³ overlay projects 3 and 5.</p>	With Lakefield (MINN) to Winco-Burt extension, adds new path, enables wind transfer from MISO west to IL/WI. Adds path from Central IA to Hazelton.	<p>MEC share of the costs is \$420.7.</p> <p>ITCM costs are confidential.</p>	<p>MVP cost allocation approved by FERC.</p> <p>Approvals needed from IA and MN.</p> <p>No date set for IUB filing.</p>
<p>Ottumwa (IA) to Adair (MO) (MVP #7)</p> <p>Includes 345 kV lines, substations, may include 161 kV upgrades.</p>	MEC and ITCM	<p>Approved as part of MVP portfolio.</p> <p>Initially part of RGOS project 6.</p>	Adds new transmission from Central IA to MO & IL. New outlet for OGS. 3 rd 345 kV link between IA-MO. New east-west path across MISO. Works With MVP #8 (Adair-Palmyra). Increases transfer capability between IA and IL.	<p>Percent ownership split not available.</p> <p>MEC share of Ottumwa-Adair line and Ottumwa terminal is \$35.46</p>	<p>MVP cost allocation approved by FERC.</p> <p>Approvals needed from IA and MO.</p> <p>No date set for IUB filing.</p>
<p>Oak Grove (IL) to Fargo (IL) (MVP #16)</p> <p>345 kV line, includes 161 kV upgrades, terminal addition.</p>	MEC and Ameren.	<p>Approved as part of MVP portfolio.</p> <p>Initially part of all three RGOS overlays.</p>	New path between IA and IL. New transmission source to Quad Cities area. Helps reduce loop flows in Galesburg area.	MEC share is \$69.4	<p>MVP cost allocation approved by FERC.</p> <p>345 kV facilities at Fargo will need to be built by Ameren before this project can be built.</p> <p>No date set for IA/IL filing.</p>
<p>Midwest Line</p> <p>Two alternatives are under consideration.</p> <p>First option - Adair County (IA) to Henry County (IL) 265 miles.</p> <p>Second option - Black Hawk County (IA) to Keokuk county (IA) to Louisa county (IA) to Henry county (IL) 235 miles.</p>	<p>Electric Transmission America (ETA) 50%</p> <p>and</p> <p>MEC subsidiary 50%.</p>	<p>Has been submitted as a conceptual project for inclusion in MTEP and RTEP.</p> <p>Grew out of SMARTtransmission study conducted by ETA, ATC, Exelon, Northwestern Energy, Exelon, and MEC.</p> <p>The study analyzed regional needs (Southwest Power Pool, MISO and PJM). Consistent with RGOS overlay.</p>	<p>Iowa portion can integrate large amounts of generation (anticipated to be wind - based on large wind generation in MISO interconnection queue requests).</p> <p>Complete SMARTtransmission project could integrate 56.8 GW of generation.</p>	<p>Capital costs are \$500 to \$800.</p> <p>Anticipated to be recovered through wholesale transmission rates within MISO and possibly PJM.</p>	<p>FERC Section 205 filing is expected in early 2012.</p> <p>No date set for IA or IL filings.</p>

³ In 2009, MISO with regulatory and stakeholder input completed the RGOS study that analyzed the transmission necessary to deliver wind generation to load for the western portion of MISO.

Project Name And Description	Sponsor	RTO Process Status	Reliability Issues	Capital Costs (\$2011) Million	Regulatory Approval Status
ETA project identified by ITC in its filing	Electric Transmission America (ETA).		Project could connect to ITC Hazelton substation.		
Green Power Express (GPE) Concept introduced by ITC in 2009.	ITC	A version of this project (Iowa segments) was included in MVP portfolio. MISO utilized 345 kV instead of 765 kV.	ITC anticipates that current and future MVP projects will provide the functional equivalent of the GPE proposal.		Rate structure - formula rate, return on equity and capital structure was approved by FERC.
Wind on Rails Inc. 450 miles long DC line from Council Bluffs (IA) to Joliet (IL).	Wind on Rails, Inc.	Not working with any RTO.	Acquired railroad right-of-way from Hawkeye Land Co. May need right-of-way in IA at wind resource locations.		Need approval from FERC, IA and IL. No filing dates available.
Various Duke-America Transmission Co projects Identified by IPL in its filing.	Duke-America Transmission Co (Duke)				Staff update: Duke filed an application with FERC on 4-20-12 requesting transmission formula rate and incentives (FERC Docket ER12-1593).
Clean Line One bi-pole 600 kV, 500 mile transmission line with one convertor each in IA and IL. Will need AC radial gathering lines, interconnect to existing network at eastern terminal in O'Brien county, IA for robustness.	Clean Line Energy Partners – ZAM Ventures and Michael Zilkha (TX)	Jan 2010, submitted merchant transmission application with PJM and has a queue position. Feasibility study is underway. PJM and MISO study coordination is necessary. MISO to conduct a “no harm” study as part of MTEP2012. Clean Line acquired 3 merchant queue positions recently that could speed-up PJM study process.	Provides outlet for wind from NE/IA/SDAK to IL and east. Capable of delivering 3,500 MW of wind. Expects to support RPS goals in PJM states by delivering 15,000 GWhrs of energy. Has received inquiries from non-wind generators.	Initial equity investors are providing capital for initial development and permitting work. Cost estimated as \$1.7 billion.	Conducted stakeholder meetings and open houses. Construction will begin in 2014 and in-service in 2016. Plans to file permit application with Army Corps of Engineers in first quarter 2012. Needs approval from IL and IA. Staff update: FERC app. for negotiated rate authority was filed on 11-8-12 (FERC Docket ER12-365-000). Board informational meetings are anticipated in fall of 2012 at the earliest.

MVP Development: MISO's MTEP2011 report states that, in 2008, MISO, with assistance from the Midwest Governors Association (MGA), Upper Midwest Transmission Development Initiative (UMTDI), and Organization of MISO States (OMS), began the RGOS study to identify a set of transmission portfolios necessary to enable load serving entities to meet their RPS mandates at lowest deliverable wholesale costs. The study focused on the western MISO region. Energy zones for the RGOS study were chosen with consideration of more factors than wind capacity. Existing infrastructure such as transmission and natural gas pipelines also influenced the selection of zones. Therefore, the zones could be used for a variety of different future generation types and policies. The RGOS analysis produced three transmission portfolios. Elements common between these portfolios and earlier analyses were identified to create the "2011 Candidate MVP Portfolio." After further analysis the portfolio was refined into the proposed "2011 MVP Portfolio" consisting of seventeen projects that was recommended to and approved by the MISO Board of Directors in December 2011. MISO Board approval defines the transmission plan and requires Transmission Owners (MEC and ITCM) to use good faith efforts to construct the projects. A figure showing the 2011 MVP portfolio is shown in Attachment B. The portfolio was refined to meet certain criteria to ensure that the portfolio and each project in the portfolio was justified under MVP criteria and that the portfolio benefit to cost ratio was optimized. MVP criteria were approved by FERC.

MEC and ITC discuss several MVP projects (Projects 3, 4, 7, and 16) in their comments. In general, the projects improve Iowa's transmission system reliability by relieving congestion in some areas and providing additional paths for power delivery including delivery of wind generation. These three projects in association with other projects in neighboring states create new transmission paths between Iowa/Illinois, Iowa/Wisconsin, and Iowa/Missouri. The transmission systems around the Ottumwa Generating Station and the Quad Cities Station are also improved by providing additional outlets for the generation.

MISO's analysis concludes that the MVP Portfolio could support 25,675 MW of additional nameplate capacity across the MISO footprint, enabling the delivery of 12,095 MW of wind generation on the MISO system. Included within the 12,095 MW estimate is 5,450 MW of nameplate wind capacity in the Iowa wind zones.

Total MVP capital costs are estimated as \$5.2 billion. MEC's share of the capital cost for all MVPs is \$525,561,000. MEC estimates that approximately 5 percent of the annual revenue requirements from its MVPs will be paid by MEC and recovered from retail customers subject to future Board proceedings. MEC also anticipates that transmission will continue to be a relatively small portion of MEC's overall retail revenue requirement. Assuming MISO-wide average residential customer usage of 1,000 kWh per month, the average residential customer is estimated to receive \$23.00 in annual benefits at a cost of \$11.00 per year.

Midwest Line: MEC states that this project grew out of The Strategic Midwest Area Renewable Transmission study, or SMARTransmission study that was completed in October 2010. MEC was one of the original sponsors of the study along with other Midwest utilities. The SMARTransmission study was undertaken to investigate transmission overlay possibilities covering a wide geographic area by looking across the seams of the Mid-continent Area Power Pool (MAPP) and three Regional Transmission Organizations – Southwest Power Pool, MISO, and PJM Interconnection (PJM). The study validated the idea that a transmission overlay would relieve significant constraints. Phase 1 of the study resulted in three transmission overlay alternatives that could reliably transfer energy from the western part of the study area to the eastern part. Phase 2 of the study analyzed two alternatives and found that the two alternatives studied have substantially similar economic and environmental performance as well as the ability to reliably deliver wind generation. The overlays included several lines across Iowa (both north-south and east-west direction). Attachment D provides a diagram of one of the overlays from the SMARTransmission study. MEC's proposal for the Midwest Line (which has two alternative routes under consideration) is based on conclusions drawn from the SMARTransmission study. Since most of the generation in the MISO Interconnection Queue is wind generation, MEC anticipates that most of the 56.8 GW of generation that can be carried over this line would be wind.

GPE: In 2009, ITC announced its plans to build a 765 kV network consisting of approximately 3,000 miles of transmission lines across portions of North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Illinois, and Indiana at a cost of \$10-12 billion. Attachment E provides a conceptual layout of GPE. ITC in its filing clarifies that MVP Portfolio follows similar electrical paths and begins to accomplish the same purposes as the GPE proposal. ITC envisions that future MVP projects will ultimately complete a high voltage network functionally equivalent to the GPE proposal.

Inquiry Participants – Key Concerns and Recommendations

MRES is concerned that return on equity (ROE) adders for interregional transmission projects could substantially increase transmission project costs.

OCA points out flaws in the Federal Energy Regulatory Commission (FERC)-approved MISO MVP portfolio cost allocation mechanism and points out that this reflects a significant shift in transmission planning protocol as it emphasizes wind resource development. OCA believes that it is critical that state approval of MVPs be conditioned on an independent, credible demonstration of need, including clearly-defined public policy, where applicable. OCA further states that MISO's MVP tariff does not encourage this careful attention to need.

The Environmental Group recommends that transmission expansion should not be built for its own sake. Transmission lines that will have negative impacts should not be built. Transmission line applicants should answer:

- Whether the proposed line prolongs the life of a coal plant or is necessary for the proposed nuclear plant?
- Could construction be avoided by increasing energy efficiency and demand side management at lower cost?
- How much renewable energy will be delivered?
- Do the proponents intend to engage stakeholders beyond the 199 IAC requirements for meetings and notices?

Sierra Club suggests that the Board should introduce a new standard into the transmission line siting process related to renewable energy use. Specifically Sierra recommends that new transmission should predominantly prioritize renewable energy. This must be accomplished despite FERC's non-discriminatory access policies. Sierra Club adds that Clean Line states in its filing it plans to seek such authority from FERC. The Board should require all transmission providers to seek such authority.

IAMU is most concerned about severe local cost impacts during the development of the MVPs, specifically because LSEs in MISO may not have hedges available to them for new or existing resources due to reconfigurations of both the transmission system and generation resources while the MVP projects are being completed in the current MISO construct. IAMU recommends that the Board encourage municipal ownership of transmission lines.

Several commenters stated that the need for the proposed Direct Current (DC) lines (Clean Line and WOR) should be vetted through an inter-regional planning process. IPL states that the need for GPE and Midwest Line needs to be vetted through the inter-regional planning process which currently does not exist in the regions affected by these lines.

WOW states that information submitted in this docket demonstrates the need for transmission expansion in Iowa in order to further the state's clean energy and economic development goals.

MEC states that the MVP portfolio provides an average annual estimated value of \$1,279 million over the first forty years of service, at an estimated average annual revenue requirement of \$624 million. In siting proceedings, the Board should recognize the thoughtful review and not depart from prior Board precedent.

Staff Analysis

Staff believes that the two main goals set out in the Board Order initiating the inquiry have largely been met. Each goal is discussed separately.

Gather Specific Project Information: Project sponsors described their projects and provided cost-benefit information when the information was available. They also provided information regarding the status of pending regulatory approvals. In addition, other parties provided comments on individual projects as they deemed appropriate.

With respect to potential competition between proposed projects, no major competition between proposed projects has been identified by the parties in their initial or reply comments although arguably at least some competition for markets exists. No party provided a comprehensive analysis that evaluated the various proposed projects after applying similar assumptions/inputs. Since each project sponsor's analysis incorporates assumptions that may or may not be common with another sponsor's analysis it would be challenging to draw any credible conclusion regarding competition between proposed projects based on the information filed in this docket.

Staff notes that while the Board did express an interest regarding the interplay between the various projects, the inquiry was not intended to compare, contrast, or evaluate the merits of proposed projects. The inquiry was primarily intended to develop a comprehensive list (including the development status) of currently proposed transmission projects in Iowa. Staff believes that this goal has largely been met.

Stakeholder Comments Regarding Policy Initiative Discussion: Staff believes that no major policy initiatives have been proposed that require immediate consideration. Inquiry participant policy-related recommendations can be grouped in two categories – cost allocation/recovery and transmission line siting.

Cost recovery/allocation: OCA is concerned about the MVP cost allocation process. MRES is concerned about the return on equity (ROE) adders for interregional transmission projects. Staff notes that both of these concerns have been addressed by FERC and the MVP cost allocation issue has been appealed in the courts. Attachment C is a diagram that shows various zones and cost-benefit ratios for each zone for the MISO MVP projects outlined in the MTEP 2011 report. For Iowa (MISO MTEP study Zone 3⁴), MISO estimates the benefit-cost ratio as 1.6 to 2.8. This benefit is from all MVP projects in MTEP2011 and not just from projects supported by Iowa transmission owners (MEC and ITCM). Both Clean Line and Duke have filed with FERC for a formula rate for cost recovery. GPE had also received FERC approval of a formula rate for cost recovery, return on equity, and capital structure.

⁴ Zone 3 largely consists of MEC, ITCM and Muscatine Power and Water municipal.

Transmission line siting: Sierra Club promotes that discriminatory access to renewables be considered in Board decisions on transmission issues. The Environmental Group recommends that transmission lines that have negative impacts should not be built and energy efficiency and demand side management be considered in granting franchises. MEC recommends that the Board not depart from past precedent when reviewing siting applications. Staff notes that Iowa Code chapter 478 defines criteria that the Board uses to grant transmission line franchises and the Board cannot adopt additional criteria not supported by current law. Sierra Club's proposal clearly conflicts with FERC's policies established under Orders 888 and 890.⁵ In response to the Environmental Group's recommendation regarding negative impacts of transmission lines, staff clarifies that Iowa law does include provisions intended to minimize interference with land use and it may not be possible to build any electric line with no impacts.

Reviewing the merits of any specific project outside of a contested franchise proceeding departs from Board's precedent. Staff believes that the Board can consider broad or specific policy recommendations when individual franchise applications are filed with the Board. IAMU is most concerned about local cost impacts that could hurt its members during the development of the MVPs. Staff notes that MISO has clarified in several meetings that in-service dates and construction dates for MVPs will be revised as project development matures.

Staff Conclusion: The information filed in this docket was current as of its submittal. However, as time passes the information becomes dated. In addition, written filings, while useful, are limited in their ability to convey nuance and context. For these reasons Staff believes it would be beneficial to schedule a wrap-up workshop which would:

- Provide Staff the opportunity to present its findings,
- Provide project sponsors the opportunity to update project status, and
- Provide stakeholders an opportunity to briefly summarize their concerns.

IV. Recommendation

Staff recommends that the Board direct General Counsel to draft an order for the Board's consideration scheduling a wrap-up workshop for the purposes of

⁵FERC order 888, issued in 1996, contained the pro-forma Open Access Transmission Tariff which required transmission owners to provide open, non-discriminatory access on their transmission system to transmission customers. Independent transmission providers were allowed to vary from the requirement if the variations were equally or more conducive to the tariff's objective. Order 890, issued in December of 2007, provided greater specificity to reduce opportunities for undue discrimination and establish rules for open and transparent planning and use of the nation's transmission system.

accepting transmission project updates, and to allow inquiry participants an opportunity to make brief oral comments.

RECOMMENDATION APPROVED

IOWA UTILITIES BOARD

/spb

/s/ Elizabeth S. Jacobs 6-8-12

Date

/s/ Darrell Hanson 6-26-12

Date

/s/ Swati A. Dandekar 6-27-12

Date

Attachment A

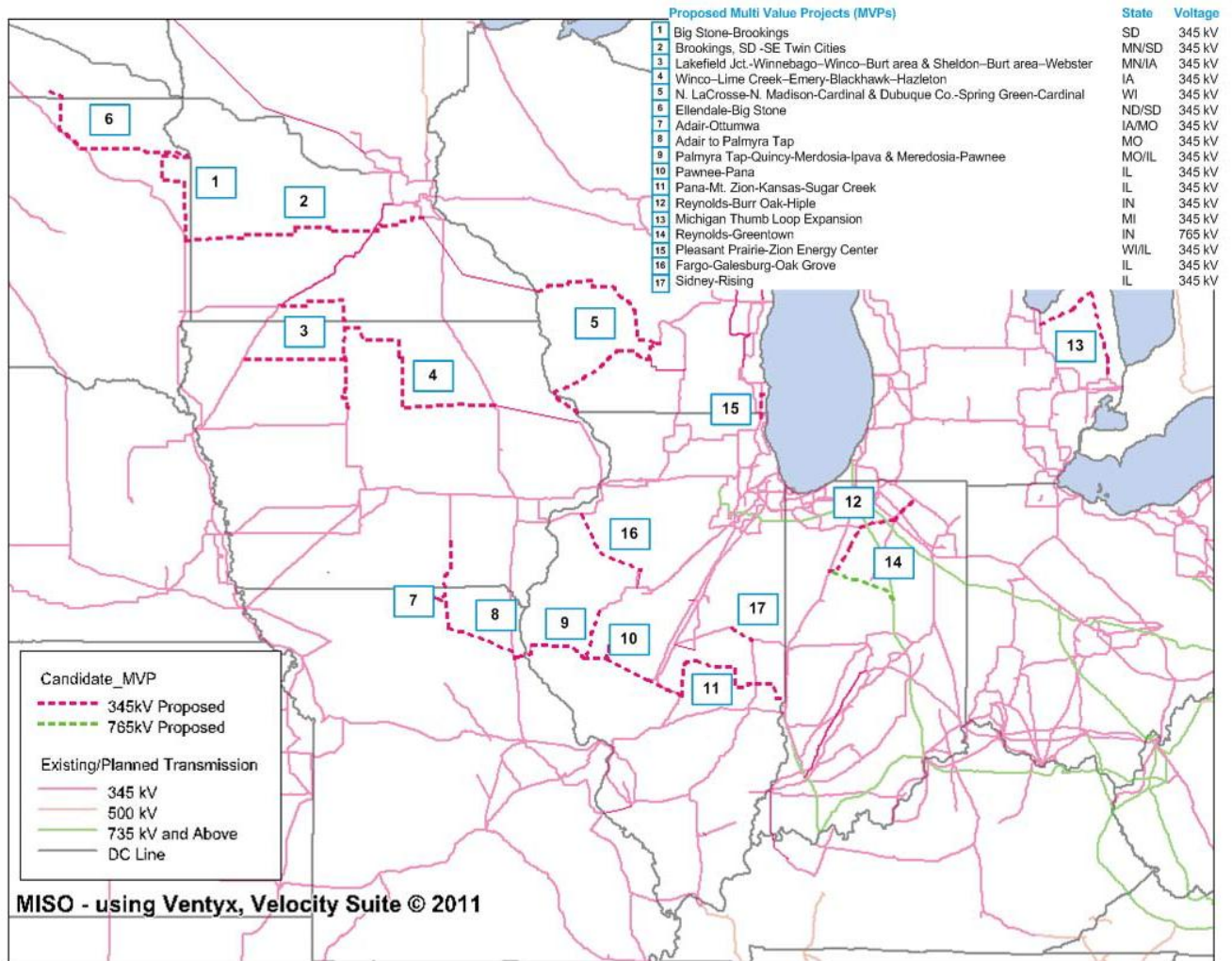
Inquiry questions from the Board order issued on August 16, 2011.

1. The proposed project, beginning terminus and end terminus (presumably at least by county, more detailed description if possible), MW size, DC⁶ or AC⁷, location of interconnects with existing facilities and other major facilities such as converter stations or substations, and proposed construction commencement and in-service dates.
2. How far the proposal is in the regulatory process? When were filings made or are anticipated to be made with the Board or/and Federal Energy Regulatory Commission (FERC), the date of the filing and the purpose for the filing.
3. What is the status of the project in the regional transmission planning process – when were the requests made with MISO (Stage 1 planning, Stage 2, Stage 3, Stage 4) and PJM (if applicable)
4. Does the project have financing? Explain
5. Does the project have a transmission contract? Firm/non-firm? For how many MW? Explain.
6. What are the current projected impacts of the proposed project? (The impacts here and costs below should be provided by year. The net present value of the project to Iowa parties in 2011 dollars should be calculated, with all relevant assumptions, including key assumptions concerning interest rates and change in construction costs over time.)
For ratepayers: Reduced congestion and energy costs (\$/year for which customers); congestion and constraint relief - comment on MISO's analysis; increased reliability (for example, reduced loop flows) - Explain.
For landowners: Easement revenues (this information should be provided confidentially).
For state or county residents: Income taxes, Property taxes.
For generation developers and other shippers: Wind generation - how many MW? Anticipated rate \$/MW and/or \$/MWh?
Other generation (list) - how many MW? Anticipated rate \$/MW and/or \$/MWh?
7. How much right-of-way will be required in Iowa - length (miles) and width, area for substations and converters, etc.
8. Other impacts (specify).
9. What are the currently projected costs of the project?
Capital Cost, Annual Cost (Recovery of Capital, assumed depreciation life, and salvage cost), Recovery on Capital, Operating and Maintenance Costs, Other Costs (specify)
10. Reliability and operational impacts:
Contingency Readiness
Voltage, Frequency and Reactive Power support (Explain)
Annual cost, to be borne by _____
11. Transmission Facility costs not recovered from transmission customers
\$ per year, recovered from _____

⁶ DC – Direct Current.

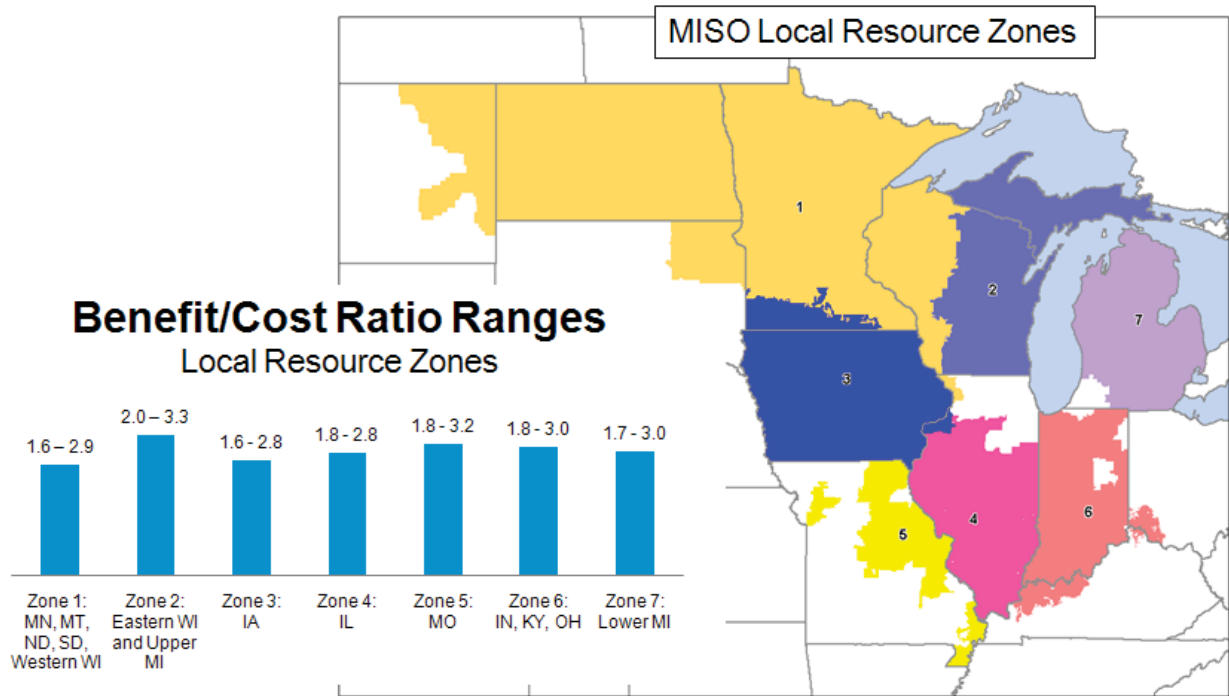
⁷ AC – Alternating Current.

Attachment B



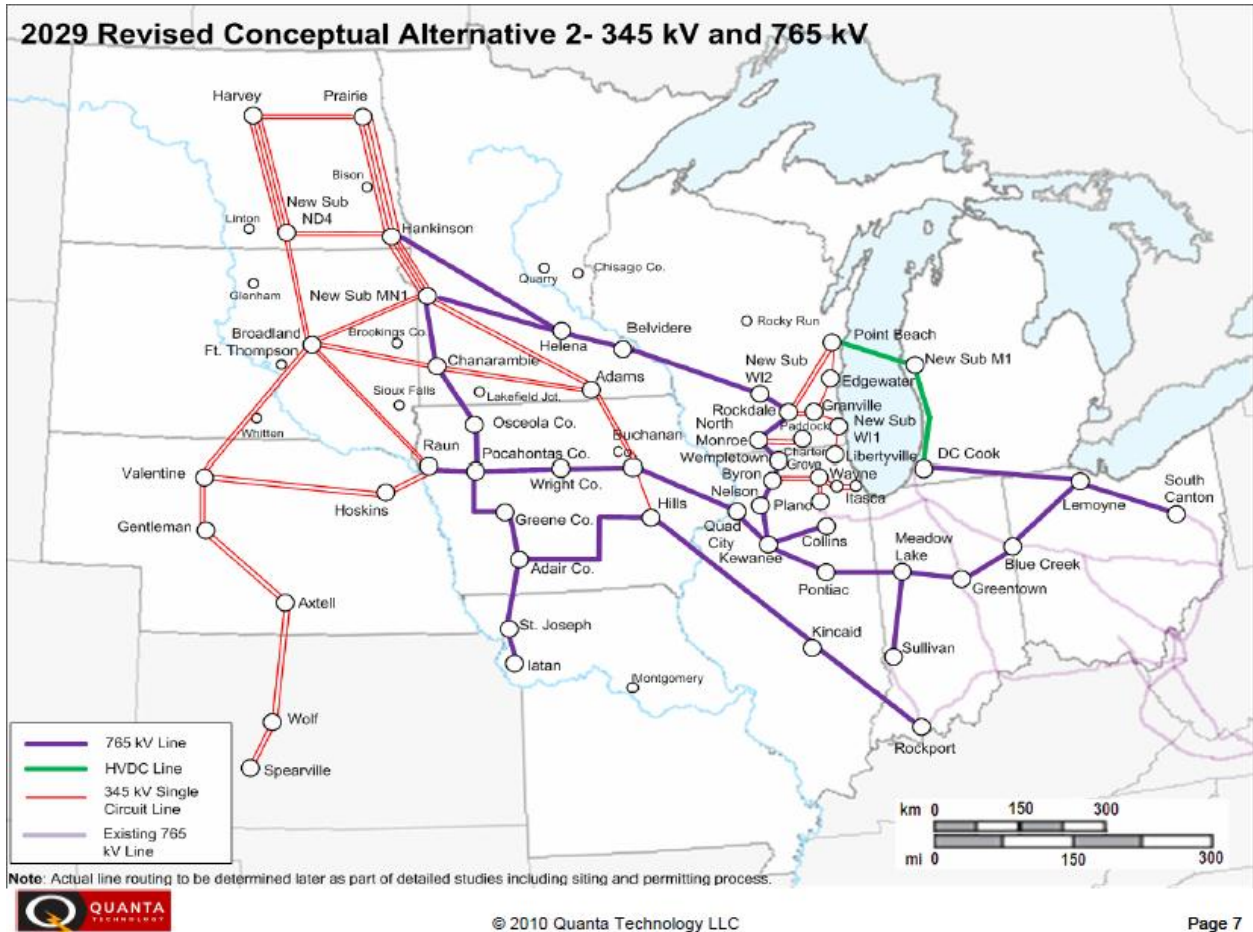
Proposed MVP Portfolio (Figure 1-3: MTEP 2011)

Attachment C



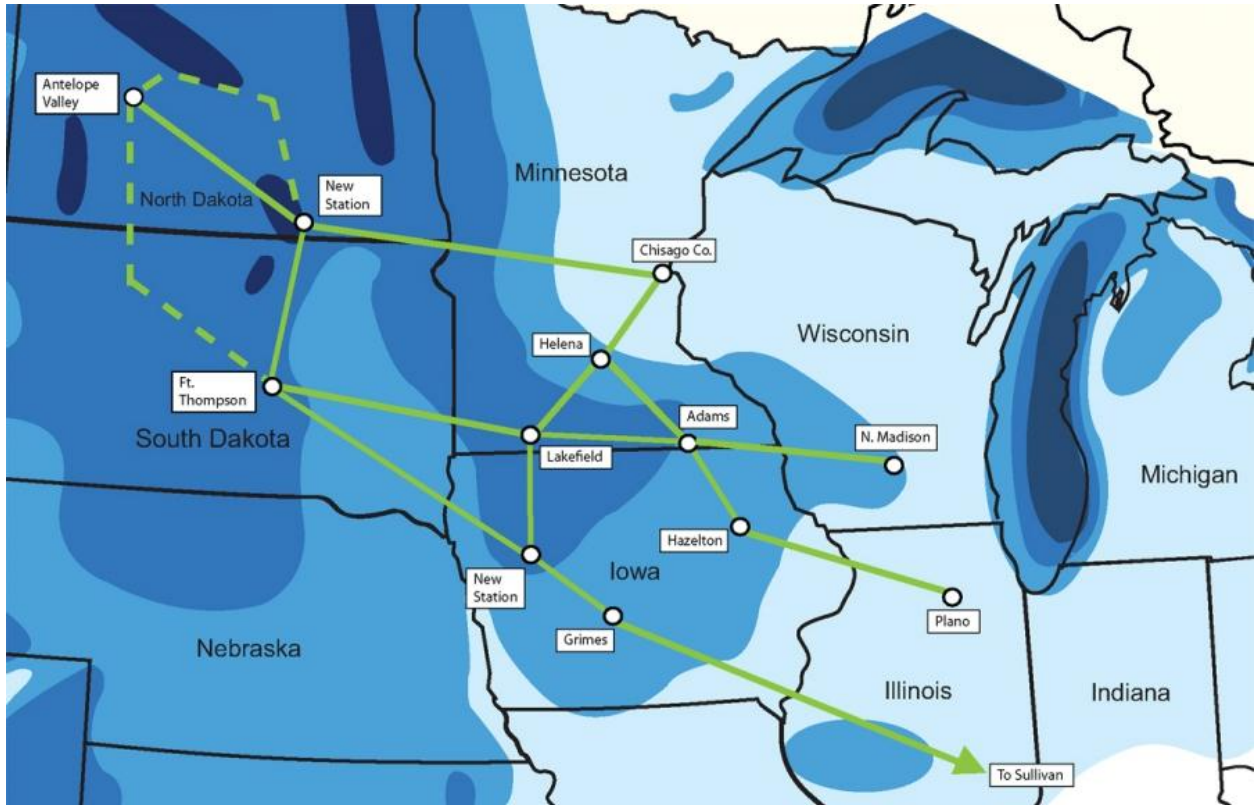
MVP Portfolio Zonal benefit cost ratio (Figure 1-4 MTEP 2011)

Attachment D



One of the three SMARTransmission Study Conceptual 345 kV/765 kV
Transmission Alternative Considered
(September 21, 2010 Stakeholder meeting presentation)

Attachment E



Conceptual 765 kV transmission layout for Green Power Express
Shaded areas show wind power class -- light blue (200 w/m²) to dark blue (2000 w/m²) at 50 meters
(<http://www.itc-holdings.com/itc-holdings/the-green-power-express.html>)

Attachment F

Detailed summary of comments filed by inquiry participants in Board Docket No.: NOI-2011-0002.

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I. Summary of Initial Comments Filed on October 3, 2011

Iowa Association of Electric Cooperatives

Letter: p.1

IAEC members are not presently proposing any major transmission line projects as defined in the Board order. IAEC members are concerned about the costs and benefits of such projects to the extent that the same can cause rate increases to customers. IAEC has no information to provide responses to the inquiry but reserves the right to file additional comments.

MidAmerican Energy Company

Comments: pp. 1-51, Attachments I through IV

New transmission projects may involve large capital investments, and MEC wants to highlight important facts. MEC anticipates that transmission will continue to be a relatively small portion of MEC's overall retail revenue requirement. Under MISO leadership **only** projects whose benefits significantly exceed project costs are approved. The anticipated benefits may take multiple forms, including:

- Increasing access to lower cost generation by reducing or eliminating transmission constraints.
- Increasing revenues from wholesale electric sales (which have benefitted MEC's Iowa electric customers) by reducing or eliminating transmission constraints which currently prevent optimizing the potential value of wholesale sales.
- Enhancing reliability by reducing the potential for outages and increasing the availability of ancillary services.
- Expanding the potential for greater exploitation of Iowa's renewable energy potential and the jobs and benefits resulting from such economic development.

MEC has divided its response by sets of projects as MEC plans to participate in three sets of Multi Value Projects (MVPs)⁸. In addition, an affiliate of MEC is participating in the development of a transmission line project. The four projects described below are (1) the Combined Iowa MVPs; (2) the Ottumwa to Adair MVP that forms part of a project from Illinois to Missouri; (3) an MVP extending from Oak Grove, Illinois to Fargo, Illinois; and (4) the Midwest Power Transmission Line (Midwest Line), a 765 kV or double-circuit 345 kV project proposed to be owned by Midwest Power Transmission Iowa, LLC, and Midwest Power Transmission Illinois, LLC, companies co-owned by Electric Transmission America, LLC (ETA), a transmission joint venture affiliate of MEC and MEHC America Transco, LLC.

⁸ MVPs were developed as part of MISO's MISO Transmission Expansion Plan (MTEP) process.

MISO has estimated the range of benefits for the entire portfolio of MVPs by seven Resource Adequacy Zones. Zone 3 consists of MEC, ITC Midwest (ITCM), and Muscatine Power and Water. The estimated benefits for Zone 3 are reasonable estimates of the estimated benefits for the State of Iowa. MISO's analysis of the benefits accruing to Iowa (Zone 3) from investment in MVP shows about two dollars of benefits for each dollar of investment. MISO projected benefits do not include the economic development multiplier that would accrue to Iowa.

The three MEC MVP projects are being developed to provide multiple benefits, including relieving transmission congestion, increasing reliability and providing additional transmission capacity across Iowa. Specific transmission paths are discussed in the description of each project provided below. A schedule for holding informational meetings has not been set yet. The new facilities will receive rate treatment pursuant to the MISO tariff. Cost recovery will be governed by future rate proceedings. MEC will finance its projects as part of its normal financing activity. The MVPs will be available for all transmission services including network service, firm and non-firm point-to-point service and generator interconnection service. The revenue requirements associated with the MVPs will be allocated to the entire MISO footprint. For Iowa, the range of estimated benefit to cost ratios for the entire MVP portfolio is 1.6 to 2.8. At this time, it is premature to estimate easement revenues, property tax revenues, and income tax revenues from these projects.

MISO has estimated that the entire MVP portfolio will enable an additional 12,095 MW of wind generation on the MISO system. This amount of wind will be curtailed if the MVP portfolio is not built. MISO/MEC has not evaluated other generation that could be served by these projects. It is premature to assume the amount of right-of-way that will be required for this project. Additional benefits include enhanced generation policy flexibility (ability to support multiple types of fuel resources); increased system robustness (improved ability to recover from outages); decreased natural gas price risk; decreased carbon output; decreased wind generation volatility, including increasing the geographic diversity of wind resources; and increased local investment and job creation. More details of these benefits are provided in the various MISO MVP-related presentations and reports. MEC's share of entire MVP portfolio costs (including allocated costs from non-MEC MVPs) is \$525,561,000. Total MVP costs are estimated as \$5.2 billion. MISO tariff Attachment MM is used to determine the annual revenue requirement, return on capital cost, and depreciation. The MVP usage rate is calculated from total revenue requirements divided by MISO energy delivered to load and exports. MISO tariff Schedule 26-A is used to collect usage rate from loads and exports. Depreciation and salvage costs are consistent with MEC's normal practices.

MEC estimates that approximately 5 percent of the annual revenue requirements from its MVPs will be paid by MEC and recovered from retail customers subject to future Board proceedings. Depreciation lives and salvage costs for MVP projects will be consistent with MEC's normal practices based on equipment type. Operating and Maintenance expenses are included in the revenue requirements discussed above. The entire MVP portfolio was evaluated for compliance with North American Electric Reliability Corporation (NERC) standards. The MVP portfolio analysis included analysis of power flow, dynamic stability, economic, transmission loss and other issues with stakeholder input from transmission owners, transmission users, generation developers, state regulators and others. MEC is not aware of any negative impacts that the MVP portfolio is expected to have on system frequency or reactive power support. These projects are in the current MISO MVP portfolio that is expected to be submitted to the MISO Board for approval at its December 2011 meeting.

Combined Iowa MVPs (MVP #3 and #4): The combined project will provide additional transmission capacity in northern Iowa to enable new wind generation development. MEC and ITC Midwest (ITCM) will construct, own and operate segments of these two projects that will mainly consist of new 345 kV AC facilities; however, some 161 kV facilities will be rebuilt to utilize existing rights-of-way. This project has several 345 kV transmission line sections, 345 kV switching stations, and 345-161 kV substation facilities to be located in northwestern Iowa and southwestern Minnesota. Planning for the Sheldon-Webster-Blackhawk-Hazleton 345 kV line and the Lakefield Junction-Mitchell County 345 kV line began at MISO in January 2009 with the Regional Generator Outlet Study (RGOS). The projects are listed as RGOS-identified candidate projects #3 and #5. The projects were selected by MISO for the Candidate MVP portfolio study. MISO analysis showed that these projects reduced one constraint while they did not mitigate the Lime Creek-Emery constraint and reduced transfer capability on another path on Mitchell County-Hazleton 345 kV line.

Thus, MEC and ITCM proposed a new combined plan consisting of Iowa MVPs (MVP #3 and #4). According to a MISO staffer, the combined Iowa MVPs mitigate 19 constraints. The projects will increase reliability by providing additional transmission sources. Estimated costs for MEC's share for the Blackhawk-Hazleton-Emery 345kV and 161 kV line with a transformer are \$162,157,000 (\$2011); Sheldon-Burt area-Webster 345 kV line and 161 kV line with a switching station are \$258,562,000 (\$2011).

Ottumwa to Adair (MVP Project #7): This project provides additional transmission capacity from central Iowa to Missouri and Illinois to enable new wind generation development. The project mainly consists of new 345 KV facilities; however, some 161 kV facilities will be rebuilt to utilize the existing rights-of-way. This project consists of a new 1,739 MVA 345 kV line to connect the existing 345 kV facilities in Iowa (Ottumwa substation in Wapello County) to

new 345 kV facilities in Missouri (Adair substation in Adair County). Parts of the 161 kV line from the Wapello County substation in Iowa to the Adair substation in Missouri will be rebuilt to 410 MVA capacity to utilize existing rights-of-way. The new 345 kV facilities at the Adair substation will be connected to the existing 161 kV facilities through a 560 MVA 345/161 kV transformer. Planning for this project was initiated in the RGOS study as project #6. MISO stated that the project provides a path for Missouri wind resources by providing an additional north to south path and begins a new east to west path across MISO footprint. The project is included as project #7 in MISO MVP portfolio. MISO estimates that 21 constraints are mitigated by MVP #7 and Adair to Palmyra (MVP #8) and Adair to Thomas Hill projects. The project will increase the reliability of the Ottumwa Generating Station by providing a second 345 kV transmission outlet path from the Station. This project will also increase the reliability of the Iowa transmission grid by establishing a third 345 kV transmission link between the states of Iowa and Missouri, reducing dependence on the two existing lines for north-to-south and south-to-north flows. This project, along with MVP # 8 from Adair to Palmyra, will provide a second 345 kV transmission link between the Montezuma switching station and the Hills-Sub T-Palmyra-Montgomery 345 kV line. MEC's estimated share of the Ottumwa-Adair 345 kV line and Ottumwa line terminal is \$35,459,000 (\$2011).

Oak Grove to Fargo (MVP #16): MVP Project #16 provides additional transmission capacity between Iowa and Illinois to enable new wind generation. The project mainly consists of new 345 kV facilities. Some 161 kV facilities will be rebuilt to utilize existing rights-of-way. The 161 kV path from Oak Grove substation in Rock Island County, Illinois to Galesburg substation in Knox County, Illinois will be rebuilt to a 345 kV and 161 kV double circuit transmission line. The 345 kV line will be rated 1,739 MVA and the 161 kV will be rated 410 MVA. The 345 kV line will connect to the existing 345 kV facilities at the Oak Grove substation and to new 345 kV facilities at Galesburg substation. The 161 kV will connect to existing 161 kV facilities at Oak Grove substation and at Galesburg substation. The new 345 kV facilities at Galesburg substation will also connect to existing 138 kV facilities at Galesburg substation through a 560 MVA 345-138 kV transformer. A new 1,793 MVA 345 kV line will be built to connect the new 345 kV facilities at the Galesburg substation to 345 kV facilities at the Fargo substation in Peoria County, Illinois. The 345 kV facilities at the Fargo substation are planned to be in-service prior to this project and will be built as a separate project.

The planned in-service date for the project is still being determined by MISO, MEC, and Ameren Illinois. Planning for this project also began at MISO in January 2009 with the RGOS study. The RGOS report listed a Fargo to Barstow 345 kV line as being common to all three transmission overlays evaluated in the study. Barstow is another name for MEC's Substation 39. The Substation 39 and Oak Grove substation are electrically close to each other in the greater Quad Cities area. In other words, this project is nearly identical to the Barstow-Fargo

line found in all three transmission overlays studied in RGOS study. This project was selected as a candidate for the MVP portfolio. Twenty-five constraints are mitigated by this project. The project provides an additional 345 kV transmission source to the Quad Cities metro area. The project will also reduce loop flows on the Oak Grove-Galesburg 161 kV line during west-to-east and east-to-west power transfer conditions. The project will also increase reliability of the Galesburg, Illinois area transmission. MEC's share of Oak Grove-Galesburg 345 and 161 kV line, Oak Grove 345 kV line terminal addition and reconductoring of Sub 56-Sub 85 161 kV line is estimated as \$69,383,000 (2011\$).

Midwest Line: Midwest Line is a new transmission line that is being developed by Midwest Power Transmission Iowa, LLC, and Midwest Power Transmission Illinois, LLC. These companies are co-owned 50 percent by ETA and 50 percent by MEHC America Transco, LLC, a subsidiary of MidAmerican Energy Holdings Company. The Midwest Line is proposed to tie facilities in Iowa that are within the MISO footprint to facilities in Illinois, within the PJM footprint. The benefits of the Midwest Line are to integrate significant amounts of wind generation, relieve congestion, reduce transmission losses, increase import capability and power transfer capability, and improve reliability, operational flexibility, contingency readiness, voltage support, frequency support, and reactive support.

Currently two alternative projects are being considered. The first alternative would have a western terminus in Adair County, Iowa and would run generally eastward to a central terminus in Louisa County, Iowa with approximately 195 miles of transmission line and then run generally eastward to an eastern terminus in Henry County, Illinois with approximately 70 miles of transmission line. A second alternative would have a western terminus in Black Hawk County, Iowa and then run generally south to Keokuk County, Iowa and then generally east to a central terminus in Louisa County with 165 miles of transmission line and then generally east to the eastern terminus in Henry County, Illinois with 70 miles of transmission line. The facilities would either be 765 kV AC with a nominal 5,000 MVA capacity or 345 kV double circuit AC with a nominal 3,500 MVA capacity.

Substations are expected to be located at the western terminus in Adair County, Iowa or Black Hawk County, Iowa; at the central terminus in Louisa County, Iowa; and at the eastern terminus in Henry County, Illinois. The proposed dates for MISO and PJM Board approvals have not been established. The in-service date has not been determined. A schedule has not been set for holding the informational meeting or filing the franchise application with the Board. With respect to wholesale rate treatment, it is expected that FERC section 205 rate filing will be made in the next 3 to 6 months. This project has been submitted as a conceptual transmission project for inclusion in the MTEP and the PJM Regional Transmission Expansion Plan.

The project grew out of the long-range planning sponsored by ETA, American Transmission Company, Exelon Corporation, NorthWestern Energy, MEC and

Xcel Energy referred to as the SMARTransmission Study. As part of the SMARTransmission Study, transmission needs were analyzed from a regional perspective over a study area that extended across the seams of the Mid-Continent Area Power Pool and three regional transmission organizations - Southwest Power Pool, Inc. (SPP), MISO and PJM) and focusing twenty years into the future. The study report states that the study results are not intended to be used as the basis for RTO approval of specific projects.

SMARTransmission Study's preferred plan is the basis for the Midwest Line. A planning study of the Midwest Line project is being pursued and will be the basis of planning information used for a rate filing with FERC and provided to MISO and PJM as a transmission developer's study in order to begin the process of the RTO studies. This project is also consistent with the goals and overlay outlined in the RGOS. Project proposers will finance the project as part of their normal financing activity. It is expected that the project will become an integrated part of both MISO-controlled transmission system and PJM-controlled transmission systems. It will be under either MISO's and/or PJM's functional control and used to provide transmission service with no delineation as to which facilities are physically used for particular transactions. The project will be available for all forms of MISO and/or PJM transmission service.

The joint study that is currently being performed will provide information on benefits, including reduced congestion and energy costs. The SMARTransmission Study found significant congestion and constraint relief for entire sets of major transmission projects from which the Midwest Line project was drawn. At this time it is premature to estimate easement revenue, income tax revenue and property tax revenue from this project. It is also premature to estimate the right-of-way that will be required. The amount of wind generation that could be integrated as a result of the Midwest Line project is also being studied. In the interim, as a reference point, the SMARTransmission Study indicated that entire sets of major transmission projects from which the Midwest Line project was drawn were capable of integrating 56.8 GW of generation, whether wind or other types of generation. It should be noted that the present MISO and PJM generation interconnection queues are dominated by wind generation so that most of the 56.8 GW is likely to be wind generation. The project will allow integration of significant amount of generation regardless of the type of generation and serve a significant amount of load regardless of the type of load.

Capital cost to build the Midwest Line project in 2011 dollars is estimated to be \$500 to \$800 million, depending on route selection, voltage, and other design variants. It is presumed that a portion of the annual revenue requirements will be allocated to MISO entities, likely through the MVP cost allocation process because of the significant policy, economic and reliability benefits that this project could realize. A portion of the annual revenue requirements may be allocated to PJM entities. Depreciation lives and salvage costs will be consistent with the

normal industry practices based on equipment type. It is presumed that operating and maintenance costs will be included in the development of the annual revenue requirements. It is anticipated that the annual revenue requirement will include components for income taxes on the return and property taxes. The SMARTtransmission Study, which provides information about entire sets of transmission projects from which the Midwest Line project was drawn, showed significant contingency readiness, voltage support, frequency support, and reactive power support. The Midwest Line project is anticipated to be solely paid for by wholesale electric transmission use through the MISO, and possibly PJM, tariff.

ITC Holdings, Inc.

Comments: pp. 1-18

ITC and its operating subsidiary ITCM, predominantly located in Iowa, are strong proponents of new transmission development in Iowa when it is necessary to serve a public use and represents a reasonable relationship to an overall plan of transmitting electricity in the public interest as required by Iowa Code Chapter 478. ITC offers brief comments on the transmission projects identified in the Board's Order:

Clean Line: ITC does not have adequate information on the Clean Line project to offer an opinion whether the line is necessary to serve a public use and represents a reasonable relationship to an overall plan of transmitting electricity in the public interest. ITC has not seen any regional transmission planning studies that may have been performed by or for Clean Line. The information available to ITC on this project has been limited to press releases, attendance at a few of the open houses held by Clean Line in Iowa, and a couple of informal meetings held with Company personnel. While ITC is not opposed to DC lines, ITC is concerned that, to the best of its knowledge, Clean Line has not engaged MISO in evaluating the project as a part of the regional planning process. While this conceptual project uses DC technology it must still be studied as part of a regional plan unless it will be an electrical island and not connected to the AC system at any point.

ETA: Similar to the Clean Line Project, ITC does not have adequate information on this project to offer an opinion as to whether the line is needed and represents a reasonable relationship to an overall plan of transmitting electricity in the public interest. Based on press releases, ITC understands that the partners intend to connect to the Hazleton Substation, which is owned and operated by ITCM. Under current agreements, ITCM would expect to own a portion, the extent to be determined, of any transmission line connecting to its transmission substation.

Green Power Express (GPE): GPE was conceptually put forward by ITC in January 2009. More recently, Iowa projects evaluated by MISO for inclusion in its MVP Portfolio, in part, represent a more concrete version of the Iowa

segments of the 765 kV network of transmission lines envisioned by GPE developers. While MISO has chosen to utilize 345 kV instead of 765 kV, the MVP Portfolio, as discussed later in this response, follows similar electrical paths and begins to accomplish the same purposes as the GPE. ITC envisions that future MVP projects will ultimately complete a high voltage network functionally equivalent to the GPE proposal.

Lakefield to Mitchell and Sheldon-Hazleton (MVP#3 and #4): Lakefield to Mitchell and Sheldon-Hazleton Lines were evaluated as part of the MISO MVP Portfolio review process. This review included analysis of power flow, dynamic stability, economic impact, and other factors. Stakeholder input on these projects was solicited and received. MISO concluded that operation of these lines would mitigate two significant system constraints, but would not mitigate the Lime Creek to Emery constraint and would likely reduce the transfer capability on the Mitchell County to Hazleton 345 kV path. To resolve these remaining problems, ITCM, MEC and MISO evaluated the following two replacement MVPs:

MVP #3: Lakefield Jct.-Winnebago-Winnco-Burt area & Sheldon-Burt-Area-Webster

MVP #4: Winnco-Lime Creek-Emery-Blackhawk-Hazleton

MISO studies showed that these replacement MVPs relieved more constraints and generally provided better performance on Iowa's transmission system than the Lakefield-Mitchell and the Sheldon-Hazleton MVPs previously included in MISO's Portfolio.

Answers to Board Questions

ITC will have a significant interest in MVP#3 and #4 and MVP#5 and #7. MVP #5 and #7 are defined as:

MVP #5: N. LaCrosse-N. Madison-Cardinal & Dubuque Co-Spring Green-Cardinal

MVP #7: Adair-Ottumwa

Ownership of MVP #3 and #4 is shared between MEC and ITC. Ownership share has not been determined for MVP #5 and #7. All projects are proposed to be constructed at 345 kV. Existing right-of-way will be used for these projects to the extent practical. The proposed 345 kV line will be double-circuited with existing 161 kV lines when existing right-of-way is used. In-service dates for MVP #3, #4, #5, and #7 are still being evaluated by MISO/MEC/ITCM to ensure reliability is not harmed or congestion increased throughout the MISO footprint as a result of the staged construction and operation of the facilities included in MISO's MVP Portfolio. ITC plans to begin its routing studies for MVP #3 and #4 early next year.

No activity has taken place to-date at the Board with regards to these projects. FERC has determined the rate structure (MISO tariff Attachment MM and

Schedule 26-A) under which ITC will recover the costs of building and maintaining these MVP projects as a megawatt-hour charge. For purposes of this response, ITCM rate construct as approved by FERC on December 3, 2007, in FERC dockets EC07-89-000, EC07-89-001, ER07-887-000, ER07-887-001, EL07-85-000 is assumed. ITCM's rate construct is largely consistent with the FERC-approved rate construct of GPE with respect to the formula rate, return on equity and capital structure.

MVP Portfolio represents the culmination of over eight years of planning efforts by MISO and its stakeholders to minimize the total cost of delivered power to consumers while maximizing the economic benefits of the Portfolio. It is expected that MVP # 3 and #4 and MVP #5 and #7, as well as the remaining MVP Portfolio, will be approved for inclusion in Appendix A at the December 2011 MISO Board of Director meeting. An approved project in Appendix A of MTEP11 means that the transmission expansion project is approved by the MISO Board of Directors for implementation by transmission owners.

Historically, ITCM has not utilized project financing. Rather, capital expenditures, working capital and other business funding needs have been met, and will continue to be met, through cash from operations, the company's revolving credit facilities, the issuance of first mortgage bonds and equity infusions from ITC. ITCM has been very successful in raising capital needed to support capital investments in the system. To date, ITCM has raised a total of \$125 million in revolving credit facilities and \$325 million in first mortgage bonds.

Transmission contracts will not be entered into specifically for MVP #3 and #4, and MVP #5 and #7, rather, service will be granted under the MISO tariff. MISO has calculated the future retail rate impact for the MVP Portfolio. MISO calculates the total cost of the Portfolio to be between \$8,817 million and \$16,459 million, where the total cost is defined as the sum of annual revenue requirements in 2011 dollars. (MTEP11 Draft, Page 59). The economic benefits, in 2011 dollars, of the Portfolio are estimated by MISO to be \$15,572 million to \$49,318 million, resulting in net economic benefits of \$6,755 million to \$32,859 million. (MTEP11 Draft, Page 59). Under all scenarios, the Portfolio's benefits outweigh the costs. For Iowa only, MISO estimates the benefit-cost ratio to be between 1.6 to 2.8. Under all scenarios considered, addition of the MVP Portfolio is estimated to reduce retail rates for customers when generation, distribution, and transmission components are considered. From a reliability standard, construction of the MVP Portfolio will maintain system reliability by resolving violations on about 650 transmission elements for more than 6,700 system conditions. The MVP portfolio also mitigates sixteen system instability conditions.

Mileage estimates for ITC's share of the projects: Final mileage figures will not be known until routing is complete. However, for purposes of this response, the stated mileage figures offer a good proxy. For MVP #3, ITC's ownership share is

approximately 96 miles. 72 miles are in Minnesota and 24 miles are in Iowa. For MVP #4, ITC's ownership share is approximately 118 miles (all in Iowa).

Estimate of easement revenues: ITCM uses a uniform calculation to determine the value for each easement in its respective county. The uniform calculation is based on the sales for the previous year, for each of the counties involved in any proposed line. In estimating the easement revenues for ITC's ownership share of MVP #3 and #4, using an average of 2010 land values in counties affected by the line, total easement revenues in Iowa-only are estimated to be \$14,244,343.

For state or county residents: ITC provided income taxes as a confidential number. Property taxes for Iowa only are estimated as:

MVP #3: \$168,000 per year for 24 miles of line built in Iowa.

MVP #4: \$826,000 per year for 118 miles of line built in Iowa.

For generation developers and other shippers: MISO's analysis concludes the MVP Portfolio could support 25,675 MW of additional nameplate capacity across the MISO footprint, including 5,450 MW of nameplate capacity in the Iowa wind zones.

Other generation that could be served: The MVP Portfolio of projects will be used to transport all forms of energy including coal-fired, nuclear, natural gas-fired, biomass, hydro, wind, solar, etc. ITC does not favor one form of generation over another in the use of its transmission facilities. However, it is important to note that MISO built the MVP Portfolio upon a set of energy zones that were premised on a low cost approach to wind generation siting.

Right-of-way: ITC's share of projects 3 and 4 will include four new substations, three of which are in Iowa. Each substation will require approximately five acres of land.

Other impacts: Other qualitative and social benefits of the MVP Portfolio as identified (but not quantified) by MISO include: 1) Enhanced Generation Policy Flexibility; 2) Increased System Robustness; 3) Decreased Natural Gas Risk; 4) Decreased Wind Generation Volatility; 5) Local Investment and Job; and 6) Carbon Reductions.

Project costs: Detailed engineering for the projects has not been completed, but the following estimates reflect a good approximation of the cost of ITC's ownership share in MVP #3 and #4 based on certain assumptions for costs per mile and number of new or rebuilt substations.

- MVP #3: ITC's portion is approximately 96 miles. Cost information was provided as confidential.

- MVP #4: ITC's portion is approximately 118 miles (all in Iowa). Costs information was provided as confidential.
- MVP #5: This project is approximately 260 miles and is estimated by MISO to cost \$714 million. ITC will only own a portion of this project. This project has approximately 14 miles in Iowa. ITC's ownership share in the project is yet to be determined and, as such, ITC's projected capital costs and annual revenue requirements cannot be estimated at this time.
- MVP #7: This project is approximately 71 miles (40 miles in Iowa) and is estimated by MISO to cost \$184 million. ITC's ownership share in the project is yet to be determined.

Revenue requirement: Revenue requirement estimates for the first full year of operations for MVP #3 and #4 were provided as confidential information.

First year revenue requirements are calculated using MISO's Attachment MM template, which was designed to determine revenue requirements for MVPs within the MISO footprint. Under standard ratemaking, revenue requirements are highest during the first year of operation and slowly decline over the life of the MVPs. The sum of total revenue requirements (plus a levelized revenue requirement over the life of the projects) was not calculated due to the absence of data forecasts needed to calculate the Attachment MM revenue requirements over the life of the project. Revenue requirement estimates are based on numerous assumptions that could change prior to the in-service date of these projects. As such, all numbers should be considered gross estimates. The first year revenue requirement calculations assume a 60 year depreciable life for transmission poles and a 55 year depreciable life for conductor. The MVP cost allocation methodology spreads the costs through a MWh charge to Monthly Net Actual Energy Withdrawals from the MISO Energy Market, Export Schedules, and Through Schedules (except those sinking in PJM, or related to Grandfathered Agreements). Attachment MM allocates transmission Operation & Maintenance and Administration & General expense to a MVPs' revenue requirements based on gross plant. For example, if an MVP accounts for 5 percent of the gross plant on a transmission owner's system, 5 percent of transmission O&M and A&G expense is included in the MVP's revenue requirement.

Reliability and operational impacts: MISO conducted reliability analyses of the MVP Portfolio and found that the Portfolio resolved violations on about 650 transmission elements for more than 6,700 system instability conditions. Addition of the MVP Portfolio will enhance, not diminish, system performance. MISO conducted steady state analyses to determine the transmission line overloads and system voltage constraints mitigated by the proposed MVP portfolio. MISO compared models with RPS⁹-mandated wind generation, both with and without the MVP portfolio. The analysis showed that a total of 384

⁹ Renewable Portfolio Standard (RPS).

thermal overloads were mitigated by the proposed MVP portfolio under shoulder peak conditions. Under a summer peak analysis, MISO found an additional 101 thermal overloads were mitigated and 149 voltage violations were mitigated for 294 contingent events.

MISO also performed a set of transient stability analyses as required by the NERC. These analyses are conducted to ensure the ability of existing and proposed generation to stay in synchronism with other system generation under severe fault conditions. By comparing incremental wind zones, both with and without the MVP portfolio, MISO concluded that without the MVPs, 31 fault conditions would cause generators to trip off-line or incur damage, causing safety risks and potentially large scale loss of load. MISO performed voltage stability analyses to identify voltage collapse conditions under high energy transfer conditions. With the MVP portfolio in place, MISO did not observe any voltage stability issues when modeling wind energy transfers that reflected the highest system wind resource output levels.

Facility costs not recovered from transmission customers: The MVP allocation methodology spreads the costs on a load-ratio share across the MISO footprint. The cost allocation for ITC's ownership share of MISO's MVP Portfolio projects will be handled under Attachment MM of the MISO tariff, such that the facility costs will be allocated over all transmission customers within the MISO footprint and collected under Schedule 26A. These transmission customers and the load they serve will also share in the economic and reliability benefits of the MVP Portfolio. MISO has estimated that the average residential customer within the MISO footprint will see annual benefits of \$0.0019 per kWh and annual costs of \$0.0009 per kWh when the MVP Portfolio is completed, resulting in net benefits of \$0.0010 per kWh. Assuming average residential customer usage of 1,000 kWh per month, the average residential customer is estimated to receive \$23.00 in annual benefits at a cost of \$11.00 per year.

Rock Island Clean Line

Comments: pp. 1-26

Iowa has some of the best wind resources in the nation but the transmission infrastructure does not exist to connect those resources to cities that have a demand for renewable energy. Several counties in northwestern Iowa with superior wind resources lack any wind farms. Clean Line is developing the Rock Island Clean Line, an approximately 500-mile overhead High Voltage DC transmission line, to connect the renewable resources in northwest Iowa and the surrounding region with communities in Illinois and in other states to the east. Clean Line will deliver clean energy to the communities that need it, representing the new farm to market road for the 21st century.

The Project will consist of one bi-pole ± 600 kV high voltage direct DC transmission line capable of delivering up to 3,500 MW of power and will make

possible approximately \$7 billion in renewable projects at the western end of the line, creating thousands of jobs. The Project will deliver enough clean energy to power around 1.4 million homes, reduce power prices for consumers, contribute to energy security, increase state and local tax revenues, and reduce both pollution and water consumption.

The planned location for the western converter station is O'Brien County, Iowa with the eastern converter station to be located in Grundy County, Illinois. The region from which Clean Line will source its energy contains the best average wind speeds. Large areas of the resource area have average 80-meter wind speeds of 8 meters per second (about 18 miles per hour) or greater. Three of the four states from which Clean Line is likely to draw wind power, Iowa, Nebraska and South Dakota, are ranked in the top ten in wind potential. Each state has significantly more potential than the capacity of the Clean Line Project. This suggests that it is feasible to fill Clean Line with an abundance of high capacity factor wind energy. Iowa's high capacity wind potential is estimated at 28 times Iowa's current annual energy consumption, again supporting significant wind export opportunities for the state. Over 51,000 MW of active wind projects are in the MISO Interconnection Queue, of which over 31,000 MW are located in Iowa, Minnesota, Nebraska or South Dakota. There are many wind projects that have not yet submitted a queue request due to a backlog of similar requests and inadequate transmission infrastructure.

Clean Line will deliver energy into the PJM grid at the 765 kV Collins substation in Grundy County, Illinois. The PJM market is a competitive electric market with both merchant power sales and long-term contract possibilities. Clean Line serves a need for renewable energy resources in the PJM footprint, whose renewable demand far outstrips its supply in the near future. For the PJM states to reach their renewable energy procurement goals and mandates, they will need a dramatically increased ability to access cost-effective renewable energy resources. Clean Line will help meet RPS mandates and goals by delivering over 15,000 gigawatt-hours of wind energy to PJM states each year, beginning in mid-2016.

While AC transmission is the best technology for gathering and distributing smaller amounts of power over shorter distances, DC transmission is the technically and economically desirable solution for delivering large amounts of power over long distances and for integrating that power into the existing grid. As such, AC and DC technologies are complementary: AC feeder lines will help deliver wind power to the converter station at the western terminus of Clean Line and to distribute that power to homes and businesses after it has arrived at the eastern terminus of the Project.

Over the past 40 years, several DC transmission lines have been constructed that augment the existing grid and offer significant electrical, economic, and environmental advantages over AC transmission lines for long distances. In

terms of operating voltage and capacity, the Pacific Intertie (which has been operating for 30 years) is not dissimilar to the approximately 500-mile Clean Line, which will operate at ± 600 kV and deliver up to 3,500 MW of power. When transporting large amounts of power over long distances, DC transmission has three major advantages over AC transmission: more efficient transfer of energy; smaller footprint and less extensive facilities; and controllability of power flows. One drawback of DC transmission is the cost of converting AC power to DC power at the source end and then converting DC power back to AC power once it reaches its destination. All power transmitted as DC must ultimately be converted to AC. The economics of this drawback are overcome, however, when a large amount of power is transmitted over a very long distance. In this case, the cost savings associated with lower construction costs, the lack of a need for additional reactive equipment, and the reduced power losses over long distances more than offset the cost of the converter stations.

Converter stations will be located at both ends of Clean Line. Each converter station will require approximately 45-65 fenced acres. In order to accommodate the DC technology used for Clean Line, the western converter must have a strong connection with the existing grid for the conversion process. A 345 kV transmission line, to which Clean Line will be connected for voltage support in Iowa, runs Northeasterly from the Raun substation near Sioux City to the Lakefield Junction substation just over the Minnesota border. Wind energy will be delivered to the western converter station via dedicated AC radial lines. That energy will be converted from AC to DC and sent across Iowa and Illinois along the DC transmission line.

At the eastern converter the energy will be converted from DC back to AC. The eastern converter station will be located in Grundy County, Illinois, such that the Project will be integrated into the existing AC system and will deliver energy to homes and businesses in Illinois and points farther east. At the eastern end of the Project, Clean Line has several merchant transmission interconnection requests pending with the regional transmission operator PJM. Engineering studies are currently underway pursuant to these requests. At the western end of the Project, Clean Line began discussions with MISO to ensure that electric reliability is maintained.

Clean Line has also engaged leading environmental and technical firms to conduct the necessary environmental, technical, and routing studies. In June 2011, Clean Line reached an agreement with Siemens, to develop, design, and implement the DC converter stations. The Clean Line team has spent more than 18 months, conducting almost 300 stakeholder meetings, of which 212 were in Iowa, collecting feedback from interested parties on routing options. As a result of this process, the Project's database now contains more than 40,000 information points related to routing criteria.

In 2012, after receiving and evaluating public input, Clean Line will submit preferred routes to the Board and the Illinois Commerce Commission (ICC). Following the regulatory approvals, Clean Line can complete the process of securing customers and finalize construction finance and land acquisition. Clean Line anticipates beginning construction in 2014 and the Project is expected to achieve commercial operation in 2016. Clean Line expects to hold Informational Meetings in first quarter of 2012 and file franchise application with the Board in first half of 2012. Application will be filed with FERC in 4th quarter 2011 for negotiated rate authority. In first half of 2012 an application will be filed with ICC for Certificate of Public Convenience and Necessity. Permit application will be filed with Army Corps in 1st quarter 2012 for Section 10 and 404 permits.

Clean Line will be studied in MTEP 2012 under a “no harm study.”¹⁰ The project is not in the interconnection queue within MISO; therefore the stages of the MISO planning process may not be applicable to this Project. Interconnection studies that have progressed within PJM will require coordination with MISO and these discussions will ultimately lead to the “no harm study.” In January 2010, at the eastern end of the project, Clean Line submitted a merchant transmission interconnection request with PJM that has queue position V4-058. The feasibility study for this position is underway. In addition, Clean Line recently acquired three merchant transmission interconnection queue positions that will expedite study of the desired interconnection and have more fully developed cost estimates. Feasibility and system impact studies for these positions have been completed and facilities studies are underway.

The majority owner of Clean Line’s parent, Clean Line Energy Partners LLC is ZAM Ventures, L.P. (“ZAM Ventures”), which is the principal investment vehicle for ZBI Ventures, L.L.C. (“ZBI Ventures”). ZBI Ventures is a subsidiary of Ziff Brothers Investments, L.L.C. Additional equity investors in Clean Line Energy Partners include Michael Zilkha of Houston, Texas. The initial equity investors are providing capital to enable Clean Line Energy Partners to undertake the initial development and permitting work for its transmission line projects, including the Rock Island Clean Line. Regulatory approvals will be critical to Clean Line’s ability to secure the additional capital to allow Clean Line to construct the Project. The initial equity investors could participate in the project financings by making debt or additional equity investments, along with new lenders, investors and/or partners. Many successful transmission projects have followed the same model of initial equity investors funding development and a later project financing funding construction. Recent experience shows that large amounts of liquidity exist in the capital markets for transmission projects that have reached an advanced stage of development. The capital markets have a substantial history

¹⁰ Staff note: The no harm test is a comparison of two power flow models to assess reliability. A system addition option passes the no harm test if there is no degradation of system reliability with the addition of the system addition and system reliability improves or remains the same when contingency analysis of the base power flow model is compared to the power flow model containing the system addition option.

of supporting transmission projects, including merchant transmission projects, through debt and equity financings. As previously noted, a number of transmission line projects have entered into project finance arrangements to fund their construction. For example, in 2003, the Path 15 project, an 83-mile stretch of 500 kV lines in Southern California, closed \$209 million in debt financing spread across the bank and bond markets. Similar to lenders, equity investors have shown considerable enthusiasm for transmission.

Sales of transmission service associated with the project will be regulated by the FERC. Clean Line intends to seek negotiated rate authority from FERC under which it can sell transmission service at market driven rates. Contracts will be for long-term, firm service; however, Clean Line will offer both firm and non-firm transmission service and facilitate a secondary market.

Wind on Rails, Inc.

Comments: pp. 1-4

The WOR project is different from the Clean Line project. WOR is a party to an exclusive easement agreement with Hawkeye Land Company (Hawkeye) which is a 35 year old corporation based in Cedar Rapids. Hawkeye acquired various land holdings that belonged to Chicago and Rock Island Railroad. WOR has acquired exclusive rights to build high voltage DC long haul transmission lines in sections of Hawkeye's railroad right-of-way. In general, the transmission line improvements would be installed inside the outer perimeter of a 100 foot wide corridor. The main corridor of interest for WOR is an unbroken and continuous right-of-way beginning in Council Bluffs and going eastward to Joliet, Illinois. The same agreement gives WOR the right to develop and install DC transmission on additional right of way owned by Hawkeye. Hawkeye has provided a link to Google map which discloses various interests of Hawkeye. WOR is exploring the capability to carry 5,000 MW of wind generation on the rail corridor. WOR has not yet begun any activity that requires filing with FERC or the Board or that requires meeting with any regional planning organization. WOR does not have financing to begin the project but is working with vendors on planning and development. WOR does not have any transmission contracts. The main east-west corridor is 450 miles long. Additional right-of-way needed in western Iowa or other western states for the project will depend on location of wind resources. It is anticipated that purchase of electricity would need a station in Joliet, Illinois. The WOR project is different in that the project will not need right-of way from other landowners. A study has not been conducted to estimate costs. WOR has not conducted any reliability studies.

II. Summary of Comments Filed on November 3, 2011

Ag Processing Inc.

Letter: pp. 1-2

AGP is a cooperative that has soybean processing plants at six locations in Iowa: Eagle Grove, Emmetsburg, Manning, Mason City, Sergeant Bluff, and Sheldon. AGP also owns and operates a bio-diesel facility in Algona. As a large consumer of electricity, AGP is concerned with service reliability and the level of utility rates, among other issues.

AGP views the Board as the “regulator-of-last-resort,” exercising the Board’s powers under Iowa Code § 476, 476B, 478 and elsewhere to protect Iowa consumers from unnecessary and uneconomic projects. As the Board considers the merits of specific projects AGP urges the Board to consider that costs are relatively easy to calculate, as the largely formula rate setting will determine the impact on customer prices. Additionally, AGP recommends the Board treat all outsized claims of benefits with skepticism, and to the extent possible conduct Board analysis on items relying on assumptions related to future market conditions, reductions in congestion and fuel costs, and economic development impacts to Iowa.

The Environmental Law & Policy Center and Iowa Environmental Council

Comments: pp. 1-3

The Environmental Group advocates supporting renewable energy development and reduction of emissions from fossil fuel generation. This group works on state, regional, and federal policy on a range of issues, including utility energy efficiency programs, biomass and bio-fuels, large scale wind and transmission, and distributed generation.

To continue Iowa’s current national wind energy leadership into the future, Iowa will need a significant expansion of high voltage electric transmission. The Environmental Group supports transmission expansion that brings wind and other renewable energy sources on-line at a general level and will evaluate specific projects as they are proposed. This expansion should not be built for its own sake. Transmission lines that will have negative impacts that exceed the benefits should not be built. Analysis should include whether demand side management and/or distributed renewable energy provide a cost effective alternative. Additionally, the Board should consider any potential negative impacts from extending the life of coal-fired power plants that would otherwise be retired and building transmission projects where demand side management and/or distributed renewable energy could address problems at less cost to Iowa ratepayers.

The Board should require the utilities to answer the following questions before we move forward:

1. Will any of the lines currently contemplated prolong the life of any coal plants in Iowa or beyond?
2. How many MW of non-renewable energy will be delivered by each line?
3. Could construction of the lines be avoided by increasing energy efficiency and demand response programs at a lower cost?
4. Are any of the lines proposed by MidAmerican necessary for the construction of its proposed nuclear power plant?
5. Do transmission proponents intend to engage stakeholders in the planning, siting, and routing processes beyond the meeting and notice requirements of 199 IAC 11.4-11.5?

Iowa Association of Municipal Utilities

Comments: pp. 1-5

IAMU provided comments on behalf of its member municipal utilities (136 electric, 51 gas, and 540 water), that will be affected by changes in electric wholesale or retail costs brought about by new high voltage transmission projects.

Congestion costs in Iowa have caused both cost increases and cost uncertainty for IAMU members who are transmission dependent utilities (TDUs) that rely on a robust transmission grid for access to competitive power supply. Members who own generation are also dependent on a robust transmission grid for sales into the MISO market.

IAMU is concerned with the details of planning, construction cost oversight and bidding practices, project timelines and the uncertainty in the benefit-cost ratios of MVPs. Any MVPs developed in Iowa must ultimately benefit Iowa customers, rather than benefitting generator and transmission owners. Although MISO has published benefit-cost ratios for MVPs, Iowa has the lowest benefit-cost ratio range (1.6-2.8). FERC's October 21 Rehearing Order in FERC Docket No. ER10-1791-000 requires MISO to revise its tariff to include periodic reviews at least every three years to monitor the costs and benefits of the cumulative effects of all MVPs approved in the MISO MTEP process. These reviews will be valuable checks on MISO's estimates of the benefits of the MVPs.

IAMU is most concerned about severe local cost impacts that could hurt its members during the development of the MVPs, specifically because load serving entities in MISO may not have hedges (auction revenue rights) available to them for new or existing resources due to reconfigurations of both the transmission system and generation resources while the MVP projects are being completed in the current MISO construct. Until the entire set of projects is completed, it is expected that new downstream congestion problems will develop which could

significantly affect congestion that are passed through to wholesale and retail customers. Transmission dependent utilities should be protected from problems created by the incomplete grid while it is being developed.

Merchant transmission: For high-voltage DC merchant transmission proposed by WOW and Clean Line, for example, IAMU is concerned that the analyses does not included costs for the lower-voltage facilities that will also be needed. Those lower voltage facilities would not qualify for MVP treatment, so the costs could be allocated unfairly to Iowa customers. Also, the DC plans have not been vetted by the MISO MTEP process, and clearly should be if they in any way affect costs within the MISO footprint.

Bidding practices to hold down construction costs: A robust, transparent, and competitive bidding process must be required to ensure lowest construction costs.

Retail rate impacts: IAMU questions, in retail rate-making, how revenue recovery from these MVP projects will be treated to ensure that Iowa consumers benefit from the projects and do not pay twice for the improvements.

Municipal ownership: Owning transmission represents the only real, long-term hedge against transmission cost increases associated with these MVP projects. The Board should encourage the IOUs to allow municipal ownership in these projects as a way of reducing costs (through the ability of municipals to contribute tax exempt debt financing) and lessening the cost impact to consumers.

Interstate Power and Light Company

Comments: pp. 2-16

IPL reviewed initial comments filed on October 3, 2011, and provided IPL's transmission positions and project specific comments. IPL believes this approach will allows understanding of IPL's unique position in this docket and the context in which IPL evaluates high voltage transmission projects.

On January 18, 2007, IPL and ITCM signed an Asset Sale Agreement (ASA) for the sale and purchase of all of IPL's 34.5 kV and above transmission facilities. On December 20, 2007, IPL closed this sale. Since that IPL became a TDU and purchases all of its transmission services under a FERC-approved MISO Tariff.

As a MISO member, IPL is active in shaping MISO business practices to ensure:

- Alignment of cost allocation to cost causers and beneficiaries;
- Operations that comply with NERC requirements;
- Transmission congestion is addressed in a consistent manner;
- Cost allocation for generator interconnection is consistent and fair to IPL's Iowa customers. Several MISO utilities, including ITCM allow

interconnecting generators to get 100 percent reimbursement if they meet certain criteria. This method does not align with cost causer allocation method. For proper price signals for siting of new generation the cost allocation must be consistent within the MISO footprint.

- Processes support timely response to generator interconnection requests. The current backlog in the MISO queue is not ultimately driven by a lack of transmission, but rather is due to a lack of a need/market for large amounts of renewable energy that currently sits inactive in the MISO queue.

Also, IPL is active in FERC proceedings to support above policies.

IPL believes that the most fair and balanced cost allocation method would directly allocate costs to the cost causers and beneficiaries of any given project. This is supported by IPL's positions summarized below:

- IPL supported the current MVP cost allocation based upon the fact that benefits will be provided to customers in excess of the costs through the requirement of a benefit-cost ratio of greater than 1.
- IPL is supportive of MISO's current cost allocation methodologies to the extent that those cost allocation methodologies ensure that IPL customers only pay the share of costs that provide benefit. IPL is an active participant and voting stakeholder in the Regional Expansion Criteria Benefits Task Force that is charged with shaping cost allocation policy.
- IPL is supportive of MISO's MTEP process by being an active member on the Planning Advisory Committee (PAC) at MISO.
- IPL supports the position that all transmission expansion plans impacting the MISO system should be fully vetted through an inter-regional planning process.

MISO MVP Project # 3 and #4: MISO has appropriately conducted the candidate MVP studies and IPL supports the portfolio that includes these two projects in their current form. These projects have existed as concepts for many years. Development of these projects is an excellent example of MISO's value. It was not practical to build these projects because the cost of the projects most likely would have been spread over one or two pricing zones. With MVP cost allocation methodology, all beneficiaries will help pay for project costs.

Dubuque-Spring Green-Cardinal and Cardinal-North LaCrosse (MVP #5): This project creates a strong tie between Iowa and Wisconsin and is another example where beneficiaries of the project will pay for the project.

Adair-Ottumwa (MVP #7): This project is also an example of how MISO refined and improved a concept that was originally submitted.

Clean Line: IPL's position is updated in reply comments.

WOR: IPL was not aware of this project before WOR's filing in this docket. IPL will monitor this project's progress through the MISO MTEP process. IPL is neutral on this project as long as the project does not increase costs for IPL's customers or cause reliability or other concerns for IPL's customers. This project appears to be very similar to the Clean Line project.

GPE and Midwest Power Transmission Line/ETA: The need for these lines should be vetted through an inter-regional planning process which does not currently exist in the regions affected by these lines. Also, a fair inter-regional cost allocation process must be in-place before such projects can proceed. Such inter-regional processes may come about as a result of FERC Order 1000. These proposals are very similar to MVP projects and any additional projects added on top of the MVP's must meet well established criterion, including benefit-cost-ratio and need for the project.

Duke-America Transmission Co, (Duke): Duke, in association with American Transmission Company, announced, in September 2011 a set of projects. Some of these projects will be developed in Iowa. Given the scant information that has been provided by Duke, IPL cannot take a position on these projects at this time.

Midwest Independent System Operator

Nov. 3, 2011 comments: pp. 1-22

MISO was initially formed in 1996 to address Midwestern transmission owners' needs for an independent regional entity to oversee a more regional transmission system and its operations. MISO became a FERC approved RTO in December 2001. MISO is a voluntary, public interest, non-profit, member-based RTO.

Prior to MISO's creation, the region operated as a de-centralized utility-by-utility bilateral market. Reliability was coordinated by various reliability councils that reported to NERC. After its formation MISO took on responsibilities for reliability coordination in late 2001. MISO also assumed transmission tariff responsibilities under the FERC required Open Access Transmission Tariff (OATT) which is commonly referred as "Day1." Although Day 1 was a significant step, MISO created day-ahead and real-time locational marginal price (LMP) energy markets in 2005 (Day 2). These markets enable MISO and its customers to establish more transparent market clearing prices at each location during each time period. The LMPs allowed MISO to create a market for Financial Transmission Rights that allows market participants to hedge their locational price risk.

These transparent energy markets provide better information and ability for LSEs to more efficiently buy and sell electricity. The difficult to quantify benefit of MISO markets has taken on new prominence with state and national renewable standards. The MISO energy markets ensure that price signals associated with these initiatives are taken under consideration. On January 6, 2009, MISO's

Ancillary Services Market was commenced which commits and dispatches contingency reserves and regulation reserves in a co-optimized manner. The most recent evolution is the Module E for MISO's Transmission Energy Markets Tariff. Module E provides a permanent resource adequacy construct that has been approved by FERC. MISO establishes a minimum level of reserve margins based upon reliability standards to meet a loss of load event of one day in ten years. Individual states continue to have the flexibility to establish their own planning reserve margin requirements for their jurisdictional utilities. Under Module E, average reserve margin for LSEs has reduced from 15.4 percent to 12.697 percent. Savings from this reduction are substantial.

In addition to meeting FERC planning principles, the MISO Regional Transmission Planning process has as its goal the development of a comprehensive expansion plan that meets both reliability and economic expansion needs. The planning process identifies solutions to reliability issues that arise from the expected dispatch of network resources. These solutions include evaluating alternative costs between capital expenditures for transmission expansion projects, and increased operating expenses from re-dispatching network resources or other operational actions. At the start of 2006, the MISO Board of Directors adopted five planning principles to guide MISO's regional plan: 1) make the benefits of a competitive energy market available to customers by providing access to the lowest electric energy costs; 2) provide a transmission infrastructure that safeguards local and regional reliability and supports interconnection wide reliability; 3) support State and Federal renewable energy objectives by planning for access to a changing resource mix; 4) provide an appropriate cost allocation mechanism that ensures the realization of benefits over time is commensurate with the allocation of costs; and 5) develop transmission system scenario models and make them available to State and Federal energy policy makers to provide context and inform the choices they make.

MISO developed a MTEP process designed to ensure the reliability of the transmission system that is under the operational and planning control of MISO. Additionally, the plan is used to identify expansion that is critically needed to support the competitive supply of electric power by this system. The MTEP process considers all market perspectives, including demand-side options, generation location, and transmission expansion. MISO's planning principles provide mechanisms to ensure that the regional planning process is open, transparent, coordinated, includes both reliability and economic planning considerations, and includes mechanisms for equitable cost sharing of expansion costs. Further, the MISO regional planning process integrates the local planning processes of its member companies into a coordinated regional transmission plan and identifies additional expansions. The planning activities are performed collaboratively between MISO planning staff and the planning staffs of the Transmission Owners, including Independent Transmission Companies, with regular input from wider stakeholder groups.

In July 2009, MISO began working with OMS via their Cost Allocation and Regional Planning (CARP) working group and the Regional Expansion Criteria and Benefits Task Force (RECBTF) to develop a cost allocation mechanism for large regional transmission project portfolios that provide economic, reliability and/or public policy benefits across the entire MISO region. These efforts resulted in the development of the MVP, which provides public policy benefits and/or widespread economic and reliability benefits and allows for costs to be allocated on a regional basis based on energy load share ratio. MISO filed the proposal with the FERC on July 15, 2010 and the FERC subsequently conditionally approved the new project type via an Order issued on December 16, 2010 (Docket ER10-1791). In an order issued on October 21, 2011 denying in part and granting in part rehearing on the order issued on December 16, 2010, the FERC upheld all major attributes of the MVP proposal including the proposed MVP criteria and the MVP cost allocation mechanism that were conditionally approved in the order issued on December 16, 2010.

MISO began working with stakeholders on the Candidate MVP Portfolio study in September 2010 to: 1) analyze in detail the transmission system impacts of meeting existing RPS requirements through a combination of local and remote renewable resources; 2) determine the impact of the Candidate MVP portfolio on addressing transmission issues identified by simulating local and remote renewable resources; and 3) analyze in detail the other regional benefits that could be realized if the projects in the Candidate MVP Portfolio were constructed.

The recommended Iowa MVPs discussed in detail in the responses submitted by ITCM and MEC represent the alternative MVPs that will be included in the proposed MVP portfolio that will be submitted for the approval of the MISO Board of Directors in December 2011.

Missouri River Energy Services

Comments: pp. 1-3

MRES is a not-for profit action agency that provides supplemental wholesale power supply and associated transmission delivery service to the municipal electric utilities of its member communities. MRES has 19 Iowa municipal electric utilities as members. MRES does not currently own or plan to own high-voltage transmission lines in the State of Iowa. MRES supports "joint ownership" of new transmission projects such as the CAPX lines in Minnesota. MRES owns 11 percent of the Fargo – Twin Cities line and will own 5 percent of the Brookings County – Twin Cities line.

MRES is concerned that return on equity (ROE) adders for interregional transmission projects could increase transmission project costs substantially. This not only has a direct impact on transmission costs to the customer of the transmission owner who receive an ROE adder, but ratepayers encounter an

increased cost of transmission services as well. As of this writing, a transmission owner in MISO can receive an ROE that exceeds 12 percent. This percentage increases if a transmission owner receives an ROE adder. Above-market returns of this degree should reflect significant risk. The average transmission project does not have a high enough level of risk to justify receiving an ROE adder and increasing the cost of transmission service to the customer.

Cost recovery of approved new high-voltage transmission projects should be region-wide. The increased transmission capacity and reliability created by such projects has region-wide benefits, therefore it would be appropriate to allocate expansion costs across the entire region. However, a region should not be assigned costs that are substantially disproportionate to reasonably anticipated benefits. Those that receive no benefit should not be allocated cost involuntarily.

Office of Consumer Advocate

Comments: pp. 1-13

In response to the order in this proceeding, MEC, ITC, and Clean Line filed detailed information regarding their high voltage transmission projects. Respondents described a portfolio of MVPs proposed by MISO. The bulk of the portfolio of MVPs proposed by MISO are 345 kV lines. The cost of these projects is enormous, both in terms of the initial capital cost and the ongoing ownership and operational cost.

Historically, new transmission projects have been justified by demonstrated capacity and reliability needs. While it is clear from the filings that at least some of the various high voltage transmission projects are needed, at least in part, to address congestion and reliability issues, it is equally clear that much of the justification for the various high voltage transmission projects is driven by policy objectives intended to significantly increase the amount of wind generation in the MISO footprint, some of which would ultimately be used by customers located in markets outside the MISO footprint. This reflects a significant shift in transmission planning protocol.

Electric ratepayers in Iowa and throughout the MISO footprint will undoubtedly be responsible for the enormous costs associated with these high voltage transmission projects. Pursuant to MISO's MVP cost allocation tariff, state utility regulators will have little ability through their transmission siting authority to assure that the costs of MVP projects are assigned to the cost-causers and the beneficiaries in a manner commensurate with the benefits they receive. The MVP cost allocation scheme threatens to jeopardize state regulatory scrutiny over such projects by not allocating any portion of costs to interconnecting cost-causing generators and spreading most of the costs of MVP projects outside the reviewing state. This spreading of costs over the largest number of customers possible substantially reduces the financial risk for transmission line sponsors. As a result, transmission developers will be less sensitive to project costs

because most of the costs are borne by customers other than the transmission owner's customers.

Given these defects in MISOs MVP approach, it will be critical that state approval of MVPs be conditioned on an independent, credible demonstration of need, including clearly-defined public policy, where applicable. A clear and convincing demonstration of need should be based on economic efficiency and sound transmission planning and reliability considerations. Unfortunately, MISO's MVP tariff does not encourage this careful attention to need.

MISO's MVP filing transforms its planning process by creating a regional network that, combined with the existing system, provides value in excess of costs. MISO recognizes that conditions must be met before a transmission build out, including: increased consensus on energy policies; robust business case; a regional tariff that matches who benefits with who pays over time; and cost recovery that reduce financial risk.

Increased consensus on energy policies: MISO believes that an informal consensus has been reached regarding appropriate planning for energy policies based on the work spearheaded by MGA, UMTDI, and OMs CARP to develop appropriate planning assumptions. These groups have reached consensus, but they do not reflect consensus state policies in the affected regions that could be interpreted as uniformly endorsing a dramatic expansion of transmission in order to enable long distance transmission of renewable generation from Midwest states to less windy, more populous eastern states.

The diversity of opinions among states is captured well in MISO's 2008 expansion plan on page 35. New variations of opinions have emerged. Among states with RPS goals, or mandates, many prefer to meet a good portion of their individual RPS goal, or mandate, using renewable energy generation located within their states. Other states, like, Iowa have invested in transmission upgrades needed to meet and surpass aggressive RPS goals without the benefit of MVP expansion and regional cost allocation. Although MVP projects will undoubtedly bring some amount of additional reliability and capacity benefits, this does not justify Iowa being responsible for a large share of MVP costs that are apparently driven by renewable goals or mandates of other states, particularly when there is no assignment of costs to interconnecting generators who will be direct beneficiaries of this expansion.

It is important for regulators and others concerned about rate impacts to take all steps necessary to assure the full benefit and protection of actual consensus principles achieved in UMTDI and OMS CARP, including for example, that public policy driven planning must be tempered by careful attention to customers energy needs, economic factors, and existing and developing environmental laws and public policy requirements, and that transmission expansion costs must be proportionately assigned to cost-causers and beneficiaries.

Robust business case for MVP projects: The traditional analysis was reliable because transmission sponsors assumed a reasonable degree of financial risk that depended on actual future usage. This process for assuring need has been upset and substantially diluted through the MVP criteria and cost allocation scheme for MVP projects, which exempts interconnecting generators from MVP cost allocation and broadly spreads the cost of MVP projects to load in the MISO region without regard to whether MVP projects are needed by particular load serving entities.

Tariff that matches MVP costs to beneficiaries: MISO's MVP tariff deviates in important respects from the cost allocation consensus principles developed by UMTDI and CARP. First, despite the fact that the siting decision of profit-motivated private generation developers is a primary cause of the MVP proposal and that these generators will be among the primary beneficiaries of MVP projects, MISO's MVP tariff fails to allocate *any* of the MVP costs to interconnecting generators. As argued in OMS's January 14, 2011 Request for Rehearing of FERC's Order conditionally accepting MISO's MVP Tariff, this failure to assign any MVP costs to generation developers who will derive the most concrete benefit, cannot be just and reasonable.

Cost recovery method that reduces financial risk: Here, the cost recovery mechanism is based on MISO's MVP tariff. By exempting interconnecting generators from MVP cost assignment and spreading MVP costs to as many customers as possible (and allocating most of the costs to customers outside the state with siting authority), MISO's MVP tariff succeeds in substantially limiting the financial risk to transmission owners that would otherwise prompt a transmission developer to assure not only that a major transmission project is needed to address reliability and congestion issues, but also that it is an economical solution to these needs. This reduction, if not complete elimination, of the financial risk for transmission developers, coupled with incentive rate mechanisms routinely approved by FERC, means that customers are facing unprecedented cost risk for MISO's new transmission expansion regime. MISO's efforts to substantially reduce the financial risk to transmission developers and interconnecting generators means that customers have little assurance that these projects are warranted and part of a sensible and economical transmission plan.

Conclusion: The MISO analysis of proposed lines, relied upon by MEC, ITC, and other transmission owners, assumes the continued applicability, validity, and reasonableness of the informal consensus reference in MTEP 2010 and MVP portfolio. The analysis does not address to what extent the proposed project size and scope are driven by outdated policy objectives. All filings submitted in this proceeding assume that the policies objectives, project scope and size, and resulting benefits are not outdated or unrealistic and that the assumed demand for renewable energy will materialize as envisioned. Building in anticipation of

increased renewable demand could prove to be a risky bet for consumers. The ultimate questions are: Are the assumptions used by MISO to justify the portfolio of MVPs realistic in light of laws and state energy policies currently in effect? Since the time of the informal consensus relied on by MISO, there have been many changes in the economy, political leadership, and state policies both within the MISO footprint and outside; and, do the benefits to Iowa's electric customers justify the enormous expected increase in annual costs, which ultimately will be included in retail electric rates? The information filed in this proceeding does not answer either of these important questions.

Wind On Wires

Nov. 3, 2011 Comments: pp. 1-4

WOW is a 501(c)(3) not-for-profit advocacy organization working in the Midwest. WOW members include wind development companies (both large and small), turbine manufacturers, supply chain participants, tribal interests and other clean energy advocacy organizations. WOW's main objective is to promote and achieve positive regulatory and policy initiatives throughout the upper Midwest.

ITC, MEC, Clean Line and WOR have filed comments on specific projects. The Board is justifiably interested in obtaining as much early information as possible. MEC and others indicate that transmission projects require capital investment. But these needed investments are unlikely to cause any significant rate impacts to customers due to the fact that transmission has a relatively small impact on retail rates. The responses to transmission plan questions indicate that new transmission will lead to other customer benefits and will provide downward pressure on electricity costs. A second important subject for WOW is the impact of Iowa's portion of the proposed MVP cost allocation. In MISO pricing Zone 3, which includes the entire state of Iowa, the benefits are projected to be 1.6-2.8 times greater than the cost of projects.

While Iowa has been a national leader in wind generation and its associated economic development, the Board is keenly aware of current transmission constraints that are holding back future wind development in the state. According to data from the Midwest ISO (August 2011 Reliability Subcommittee & monthly Information Forum Presentations) in 2010 alone, transmission constraints led to the curtailment of nearly 4 percent - or approximately 825 GWh of available wind.

The following table demonstrates the decline in wind installations in Iowa over the past few years, due at least in part, to transmission constraints. While a significant increase is expected in 2012, continued wind expansion depends upon projects identified in this docket moving forward.

Iowa MW of Wind Installed by Year
Data from American Wind Energy Association

<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
33	5.1	879	1,599.8	341	931

It's also important to note the specific role of the Board in considering economic development when approving wind and transmission projects. Iowa Code (Chapter 478) and previous Board decisions have set a precedent that in considering franchise approvals for wind and transmission projects, economic development benefits, including payments to landowners, property tax revenue, construction jobs and purchases of equipment from Iowa manufacturers are relevant to the determination of whether a project is necessary to serve a "public use." We believe the information submitted to date clearly demonstrates the need for transmission expansion in Iowa in order to further the state's clean energy and economic development goals.

Resale Power Group of Iowa

Intervention Letter: p. 1

RPGI is an association of municipal utilities, one cooperative, and one small privately-owned electric utility in Iowa existing pursuant to an agreement authorized by Chapter 28E of the Code of Iowa. RPGI has 25 participant electric utilities. Each RPGI participant operates a distribution utility that sells electricity at retail to its residences, businesses and industries. All RPGI participants receive power through RPGI under contracts for transmission with MISO utilizing the ITCM transmission system. RPGI participants will be directly affected by ITCM transmission actions regarding high-voltage transmission projects. RPGI has reviewed the statements filed by the parties contemplating high-voltage transmission projects in Iowa and does not have positions on these initial filings.

Iowa chapter of Sierra Club

Comments: pp. 1-19, Exhibits 1 through 6

Sierra is a non-profit environmental advocacy group. Its Iowa chapter has 5,000 members. Smart transmission planning is essential to bring clean energy online quickly. Full utilization of Iowa's wind potential is critical to moving Iowa and the region beyond dirty energy and increased transmission capacity is necessary to achieve this goal. Recent studies indicate that the United States can supply all of its electricity needs through renewables (wind and solar). Geographically distributed solar and wind resources will ensure a reliable grid.

Modest changes to the projects proposed in this docket coupled with the policies described below, could go a long way in developing an integrated and geographically dispersed grid. The proposed projects are not adequate unless: Iowa's renewable energy standard is improved so more wind is sold in Iowa; fairer cost allocation is developed through MISO and attention from Board; and AC lines are developed to serve multiple uses going forward.

Requirement that new transmission be used for renewable energy: New transmission should prioritize renewable generation. MTEP11 anticipates some wind but the MVP plan also supports a variety of generation policies (wind, natural gas and other fuel sources). MVP projects that support wind generation and renewable energy use in Iowa should receive a franchise from the Board as being in the public interest. Projects that prevent consumption of renewables in Iowa should not be seen as in the public interest. Of the eight projects proposed in these filings only two projects, Clean Line and WOR are committed to renewable energy. It is not clear how Clean Line can emphasize wind resources if it is not allowed to discriminate against non-renewables because of FERC's open access requirements. Clean Line admits that non-renewables have expressed interest in the project and Clean Line's assumption of 3500 MW of wind may be optimistic. Board policy should establish that new lines are required to serve renewables and consumption of that energy should be available to Iowa and out-of-state markets.

New transmission design should allow Iowans to access clean energy: Virtually all transmission lines in the United States are AC. Arguments that support DC include that they have less line loss than AC lines and carry energy more efficiently across long distances. However, DC lines require converters to interconnect to the existing AC systems. New technologies are available that reduce AC line losses and any arguable advantage of DC lines is significantly reduced. All transmission lines in Iowa should allow Iowa generators and consumers close to the line to have available and affordable access to the grid.

Projects should engage in MISO-mandated transmission planning: FERC Order 1000 requires regional planning. According to the information filed in this docket, only the MVP projects are the product of a regional planning process. The Board should not approve projects that have not engaged in the MISO planning process. The Board should also look to MISO to integrate generators of all sizes (distributed generation and community based generation) into its evaluation of transmission proposals.

Five key principles in designing a 21st century grid: A 21st century energy policy requires a 21st century transmission policy.

Principle 1 is to use existing transmission first. Existing lines may be upgraded to extend to where the current demand is. This avoids economic and environmental impacts associated with new construction such as new right of ways and potential incursion on natural wildlife corridors.

Principle 2 is that new transmission should predominantly support and prioritize renewable energy. This effort must be accomplished despite FERC's open access transmission tariffs. FERC requires non-discriminatory access policies but this may prevent preference for renewable energy. Clean Line states in its filing that it plans to request FERC authority to give priority to renewable

resources. The Board should require all transmission providers in Iowa to seek such authority from FERC. Iowa's renewable standards are much lower than renewable standards in surrounding areas. Renewable energy produced in Iowa will be transported to neighboring states to meet their renewable standards. The Board should consider this circumstance and encourage legislators to increase Iowa's renewable standard.

Principle 3 is that an equitable cost allocation is needed. It is not clear how MVP regional cost allocation would affect Iowa consumers. It benefits all Iowans if congestion is reduced and generator curtailments are reduced. With low renewable standards in Iowa, energy produced in Iowa is exported to other states and Iowans may disproportionately pay for lines that primarily serve consumers in other states. Clean Line's project provides one on-ramp in western Iowa and all energy will be shipped out of state. Sierra does not support any cost allocation of Clean Line costs to Iowans, other than to generators with access to the line. Clean Line has not participated in the MISO process and should not be subject to MISO cost allocation methods. DC transmission must be treated differently than AC for cost allocation. Similarly Sierra believes WOR line costs should also be not allocated to Iowans using MISO methodology. The Board should ensure an equitable cost allocation to the end-users of transmission projects.

Principle 4 is that transmission siting must ideally avoid and/or mitigate impacts on sensitive natural areas and wildlife corridors. This issue was not included in the Board's questions in the inquiry; therefore, the filings in this docket do not address this topic. In other statements Clean Line has stated that they are making a valid attempt to avoid or mitigate environmental impact. The Board should clarify that to comply with environmental policies of the state transmission lines should be sited so as to avoid or mitigate environmental impacts.

Principle 5 is that small wind developers should have the opportunity to benefit from increased transmission capacity. To develop an integrated transmission grid, an important aspect is available access to renewable producers and users at affordable cost. The Board should require that any transmission project in Iowa satisfy this objective. This is not to say that Iowa wind generation should not be available to areas outside of Iowa. The point is that, to have an integrated and effective grid, affordable access should be available to everyone. Projects proposed by Clean Line and WOR do not appear to provide required affordable access.

Did ITC or Green Power Express consider DC solutions? If not, why not? DC is a good technology solution under some applications. DC was never seriously considered because of its fundamental limitation expected under current configuration. The Board should ensure that transmission lines constructed in Iowa are part of an integrated electric grid that benefits renewable energy producers and consumers in Iowa.

III. Reply Comments Filed on December 3, 2011

MidAmerican Energy Company

Dec.3, 2011 reply comments: pp. 1-25

It is clear from the number of comments submitted and the depth of issues raised in the comments that high voltage transmission projects remains an area of significant interest for stakeholders. MEC's original comments submitted focused on responding to the specific questions in the Board's notice of inquiry and described MVPs in which MEC intends to participate. With the advantage of now knowing the key issues raised by stakeholders, MEC submitted reply comments by providing additional information on the specific benefits provided by MVPs, including each MVP in which MEC proposes to participate, and with the intent of providing the Board with its perspective on the public policy issues that have been raised in this proceeding.

Many commenters were concerned about whether building additional transmission in Iowa will bring about benefits. MISO and its associated transmission owners such as MEC are similarly concerned about whether incremental transmission investments justify the added costs. It is for that very reason that MISO conducts rigorous analysis of projects and *only* approves new regional MVPs that demonstrate benefits clearly exceeding costs. MTEP11 shows a projected benefit-cost ratio for MVPs of at least 1.6 in each of the seven MISO Local Resource Zones. A second major concern is whether Iowa will receive benefits relative to the costs that Iowa electric customers may incur. Such a concern is at odds with the views of the last two Iowa Governors, who have each expressed their belief that new transmission will be beneficial to Iowa. There has been support for transmission from wind developers. Testimony in Board Docket RPU-2009-0003 from both a NextEra Energy Resources, LLC witness and a MEC witness was that lack of transmission constitutes a barrier that limits Iowa's ability to more fully develop its wind generation potential.

To provide a response to the concerns of interested parties, MEC provides a comprehensive overview of all of the benefits afforded by development of MVPs and then each of MEC MVPs, followed by specific response to individual comments. MEC also responds to concern about the allocation of the costs of MVPs to Iowa customers. The Board should recognize that issues involving cost allocation are not being raised for the first time in these comments. Cost allocation of MVPs has been extensively considered by stakeholders starting with opportunities to comment prior to the MISO MVP tariff filing with the FERC, in the formal MISO MVP tariff proceeding, and continuing through rehearing of the FERC decision in Docket No. ER10-1791, which has now been appealed to the federal courts.

Benefits of MVPs: The MISO 2011 MVP portfolio is a unique set of transmission projects developed to provide a wide variety of benefits. The benefits were determined through rigorous, impartial analysis of many transmission options. The MEC MVPs are being constructed so that the MEC transmission can reliably and cost-effectively deliver capacity, including capacity for new renewable resources and to serve the growing loads in a multi-state region. Besides meeting energy policy requirements, the MVP portfolio provides transmission congestion relief, production cost savings, operating reserve margin benefits, system planning reserve benefits, transmission line loss reduction, wind turbine investment benefits, and reliability benefits.

The 2011 MVP portfolio provides benefits in excess of costs under all scenarios studied. MISO estimated benefit-cost ratio ranging from 1.8 to 3.0. The portfolio resolves reliability violations on about 650 elements for more than 6,700 system conditions and mitigates 31 system instability conditions while it enables an estimated 41 million MWh of wind energy to meet renewable energy mandates and goals; and provides an average estimated annual value of \$1,279 million over the first forty years of service, at an estimated average annual revenue requirement of \$624 million. Additional benefits that are not quantified are generation policy flexibility, increased system robustness, decreased natural gas price risk, decreased carbon output, decreased wind generation volatility, and increased local investment and job creation. Some of the benefits of the MVPs in which MEC is participating cannot be quantitatively estimated without including the benefits of the entire 2011 MVP portfolio.

Specific Benefits of Individual MEC MVPs #3 and #4: These two projects will facilitate an additional connection between the western portion of the Iowa transmission system and the eastern portion of the system. Currently, the Iowa transmission system has 345 kV transmission lines in the western portion of the state converging in the central part of the state with only one 345 kV line (Bondurant to Montezuma to Hills) connecting central and eastern Iowa. With renewable generation connected to the western portion of the system, congestion would likely be caused due to the single 345 kV connection to the eastern portion of the system.

MVP #3 and # 4 act together to provide an additional connection from the western to the eastern portions of the system. With respect to reliability, since MEC filed its comments on October 3, 2011, MISO has completed its Candidate MVP Study and has incorporated the results into the Final Draft Midwest ISO Transmission Expansion Plan 2011 report. The Final Draft report is scheduled for Midwest ISO Board of Directors approval on December 8, 2011. The revised list of constraints shows that MVP #3 and # 4 mitigate forty constraints. These projects also enhance reliability by providing additional sources of transmission and new transmission facilities.

The Sheldon–Webster project will provide a second 345 kV source to the Webster Substation, increasing reliability in the Webster County/Ft. Dodge area. The Hampton–Blackhawk project will provide a new transmission source to the Waterloo/Cedar Falls metro area, increasing the reliability of service to that area. The planned 345-161 kV transformer additions at the Emery and Lime Creek Substations will increase the reliability of the Mason City area transmission system. If new lines are built on common structures with existing 161 kV transmission lines, based on routing studies, the rebuilt 161 kV circuits (that will be located on common structures with 345 kV circuits) will be newer and likely more reliable than the existing 161 kV circuits they would replace. MVP #3 and #4 will be located in the general vicinity of several proposed future wind farm installations that reside in the MISO Generator Interconnection Queue.

The Ottumwa-Adair MVP provides a key reinforcement in an area experiencing congestion between Iowa and Missouri. This project will establish an additional north-south path in an area expected to experience increasing congestion with the connection of additional generation in the western portion of the MISO footprint due to the existing single 345 kV connection from eastern Iowa to the south. Also, the project, in combination with MVP #8 and #9, provides reinforcement in the areas between Iowa, Missouri, and Illinois that are also experiencing significant congestion and price differentials.

MVP #7 and #8 mitigate ten constraints in the area. The Ottumwa-Adair 345 kV line will increase the reliability of the Ottumwa Generating Station by providing a second 345 kV transmission outlet path from the Station. This project will also increase the reliability by establishing a third 345 kV transmission link between the States of Iowa and Missouri, reducing dependence on the two existing lines for north-to-south and south-to-north flows. A portion of MVP # 7, allows additional power and energy to be transmitted from southern Iowa to northern Missouri and in the reverse direction. MEC's Ottumwa–Adair project also works in conjunction with the other parts of MVP #7 and MVPs #8, 9, 10 and 11 transmit additional power and energy from Iowa to Illinois and Indiana and in the reverse direction. The combined result of these projects is to increase levels of power and energy from other parts of the MISO footprint. This provides multiple benefits to Iowa, including improved reliability through support to the Iowa bulk electric system from other parts of the MISO footprint during transmission and/or generator outages in Iowa and the ability to access potentially more economic generation in other parts of MISO.

Oak Grove to Fargo (Galesburg) MVP: This project provides a key reinforcement in the area between Iowa and west-central Illinois that is experiencing significant congestion and price differentials. This project is a tie between transmission facilities in Illinois that are directly connected to transmission facilities in Iowa and other transmission facilities in Illinois which are not directly connected to Iowa facilities. The tie assists with congestion in the area between Iowa and west-central Illinois, yet it does not require a Mississippi River crossing. The tie

mitigates seventeen constraints, provides an additional 345 kV transmission source to the Quad Cities, Iowa/Illinois metro area, reduces loop flows on the Oak Grove to Galesburg 161 kV line during west-to-east and east-to west power transfers. It will also increase reliability of the Galesburg, Illinois area by providing a 345 kV transmission source. Oak Grove–Galesburg and parts of MVP #16 with MVP #3, #4 and the existing transmission system work together to increase the ability to transmit power and energy from Iowa to Illinois and in the reverse direction.

In total, the MVPs in which MEC is participating work with the other MVPs and the existing transmission system to transmit increased levels of power and energy from Minnesota, Iowa, and the Dakotas to Wisconsin, Illinois, Missouri, and Indiana and in the reverse direction thereby providing regional benefits across the entire MISO footprint.

Response to Comments of Interested Parties Submitted on November 3, 2011:

AGP: AGP questions the benefits of MVPs to Iowa electric consumers. There are multiple benefits to all Iowans from MEC MVPs. These benefits are not limited to the further development of wind power. Other effects of MVP development, such as reduced congestion and increased levels of power and energy transmitted from other areas to Iowa, benefit Iowa consumers as well.

Environmental Group: The Environmental Group generally support the addition of transmission infrastructure for renewables. However, the Environmental Group goes on to say that each project should be considered on its own merits, where transmission lines will have negative impacts that exceed the benefits, they should not be built and demand side measures and distributed generation should be examined as transmission alternatives. MEC notes that the regulatory construct does not provide for discriminating between generation sources which will utilize transmission lines, which is consistent with the physical nature of interconnected alternating current bulk electric system facilities. Generating output is transmitted based upon the physics of the system, not the type of generation that injects into the system. MEC also notes that its energy efficiency and demand side programs take electric transmission and distribution avoided costs into account. MISO analysis of the MVPs is consistent with FERC Order No. 890, which has a key requirement of consideration of energy efficiency and demand side response programs in regional transmission planning.

IAMU: IAMU generally supports transmission construction. IAMU is concerned about local congestion cost impacts of the transmission projects during the time it takes to build the projects. IAMU is also concerned about bidding practices, retail rate impacts, and municipal ownership. MEC agrees that the MVPs should be constructed as soon as reasonably possible to alleviate the ongoing congestion and the additional congestion likely to occur in the interim. With respect to competitive bidding, MEC has standard supply chain processes and

procedures that result in use of the most cost-effective supplier for its projects. MEC has a long history of working with municipal utilities in constructing transmission for local needs as well as for delivering joint-owned generation to the grid, and intends to continue to work with Iowa municipal utilities on MVPs.

Following final approvals of the MVPs, MEC intends to work with the affected Transmission Owners, including the Municipal Utility of Cedar Falls to finalize ownership details, with such activities expected to begin in the first quarter of 2012. With respect to FERC Order No. 1000 right of first refusal requirements, MEC's understanding is that MISO will work through its stakeholder process to determine how to implement a process for determining which entities will be allowed to invest in which transmission projects. MEC welcomes discussion of positions on any options proposed through the MISO process.

OCA: OCA states that cost estimates to Iowa consumers from MVPs constructed by non-MidAmerican Transmission Owners have not been provided. OCA's comment that there have been no estimates of the cost impact of MVPs on Iowa customers is not correct. OCA's filing includes cost estimates that have been previously provided by MEC and ITCM which consist of internal estimates of the costs allocated to MEC's customers and amounts calculated by MISO.

While correctly recognizing that the MVPs will provide congestion relief, reliability benefits, and further energy policy objectives, OCA states that much of the need for the MVPs is driven by the need to integrate renewables which would be used by entities located outside MISO. MEC's initial comments focused on the benefits of MEC MVPs to the MEC footprint. Other MVPs and other projects outside the MISO footprint can provide benefits to Iowa customers as well. The Oak Grove to Fargo MVP discussed above is an example. Not to construct a project because, along with reliability and congestion relief benefits to Iowa, it may deliver wind generation outside of Iowa means OCA asks for overly narrow consideration of MVP benefits by attempting to change the focus from total project benefits to benefits from individual MVPs. OCA also does not recognize that those customers outside of MISO will be compensating MISO. The effects of MVP development in total, such as reduced congestion and increased levels of power and energy transmission from other areas to Iowa benefit Iowa consumers as well.

OCA goes on to state that traditional state regulatory scrutiny over projects is jeopardized by the MVP cost allocation methods and states should be critical of projects in siting reviews. MEC notes that state utility regulators were involved with MVPs to date, which will continue as the MVPs are further developed. MISO processes call for the active involvement of stakeholders, including state regulators. MVP cost allocation methodology was significantly impacted by the activities of OMS, which includes representatives of state regulatory agencies, including the Board and its staff. MISO tariff also mandates consideration of state policy in MVP development. Attachment FF of the tariff defines MVPs as

projects that enable the MISO transmission system “to reliably and economically deliver energy in support of documented energy policy mandates or laws that have been enacted or adopted through state or federal legislation or regulatory requirement that directly or indirectly govern the minimum or maximum amount of energy that can be generated by specific types of generation.” MVP projects are in the public interest and will further the public convenience and necessity. State siting proceedings should recognize the thoughtful review and not depart from prior Board precedent.

The OCA states that the financial justification for the MVPs is inherently speculative due to the long-term nature of the benefits projections and the analysis should be revisited from time to time to update the variables. MEC notes that FERC’s order on rehearing in the MISO MVP Tariff required MISO to post an updated assessment of the MVPs every three years following approval. Thus, OCA’s concern has been addressed.

OCA implies that the MVP process reduces or even eliminates financial risk to transmission developers. MEC responds that the cost allocation mechanism has been appealed which means MEC faces the risk of the mechanism being overturned or revised substantially. Changes in MISO footprint also introduce risks of cost recovery from departed Transmission Owners. Furthermore, the magnitude of the total transmission investment in MVPs and multiple participants in the MVP portfolio results in special risk to any one participant. MEC’s ultimate success depends upon the timely completion by other project participants of their portions of the projects.

Sierra: Sierra suggests that the Board should introduce a new standard into the transmission line siting process related to renewable energy use. Sierra’s comments are inconsistent with federal and Iowa law. Transmission construction is required by FERC to be technology neutral with regard to the generation source. Iowa siting laws also do not allow the Board to discriminate between generation sources. Tying approval of transmission facilities to the type of generation transmitted is inconsistent with the physical nature of an interconnected alternating current bulk electric system where generating output is transmitted based upon the physics of the system not the type of interconnected generation.

Sierra states that existing transmission lines should be used before new transmission lines are constructed. The existing planning process at MISO and MEC already follows this approach. Sierra proposes that the Board should introduce new standards into the transmission line siting process by adopting a policy that clearly requires transmission lines to be constructed to avoid sensitive natural areas. Addition of environmental considerations to the existing electric franchising processes is a legislative determination. Departure from past siting precedent should be made with great caution and should involve consideration of all relevant factors.

Midwest Independent System Operator

Reply comments: pp. 1-5

MISO has included in this filing its Multi Value Project Analysis Full Report in which MISO staff recommends that the MISO Board of Directors approve the portfolio of transmission projects described in the report for inclusion in its regional expansion plan. This recommendation is based on the strong reliability, public policy and economic benefits of the portfolio that are distributed across the MISO footprint in a manner that is commensurate with the portfolio's costs. The report also summarizes reliability, public policy and economic benefits of the recommended MVP portfolio, as well as the scope of the analyses used to determine these benefits.

MVP projects accommodate wind generation in support of renewable energy mandates, while also supporting other generation policies by using a set of energy zones which support wind, natural gas and other fuel sources: The MVP Report shows that OCA's assertions are not accurate. The states' renewable energy mandates will support a number of different types of renewable resources. The portfolio will provide value under a variety of different generation policies. The energy zones used in MISO's MVP analysis were created to support multiple generation fuel types. For example, the correlation of the energy zones to existing transmission lines and natural gas pipelines was a major factor in Zones design. These projects enhance system reliability under different generation build outs.

OCA believes that MISO has foisted an RPS standard on all states by implementing the criteria used in its cost allocation tariff. MISO clarifies that all but one state in MISO footprint has RPS requirements or goals. Since 2002, MISO has participated in stakeholder processes. Recently, MISO has worked with MGA, UMTDI, and OMS. As part of the MVP process, MISO considered states' RPS requirements and modeled several alternative requirements. Total MVP portfolio benefits go far beyond RPS requirements as states without RPS requirements or states with in-state generation requirements will benefit. Some customers outside MISO markets are expected to displace generation, but greater benefits from the MVPs will be received by customers in the MISO footprint.

MVP process is supported by robust business case and will be updated over time: Contrary to OCA's assertions, MISO has studied in detail MVP project portfolio for three years. The first two year the projects were studied through the RGOS study while the projects were studied in the last year as the Candidate MVP study. During the entire process MISO worked with stakeholders to update models, futures, policy drivers, and design attributes of the study. All MVPs are subject to review at least once in three years.

MVP cost allocation principles have been approved by FERC and are consistent with public policy: OCA believes that MVP cost allocation method unfairly limits financial risk to transmission owners by exempting generation owners from cost responsibilities and shifting cost responsibilities. FERC has upheld all major attributes of MVP criteria and cost allocation mechanism. FERC resolved the concerns described by OCA and raised by interveners in the FERC proceeding. With regard to generator interconnection costs, FERC found that the MVP methodology strikes an appropriate balance in which the costs of new transmission facilities that provide regional benefits are allocated on a regional basis while new transmission facilities required solely for generator interconnection service are allocated to the interconnection customer that caused the new transmission facilities to be necessary.

MISO is committed to continuing to operate in the most effective, efficient way possible, and is committed to participating in important inquiries such as the instant high voltage transmission projects docket before the Board.

Interstate Power and Light

Reply comments: pp. 1-2, Attachment A

In light of recent FERC filings, IPL wishes to provide additional information in this docket to keep the Board abreast of IPL's change of position on one of the high voltage transmission projects in this docket. The Clean Line project had provided information to the Board on October 3, 2011, and this information was reviewed by IPL. IPL provided Comments, filed on November 3, 2011, in this docket that it did not have enough information regarding the Clean Line project to take a position. On November 8, 2011, Rock Island filed an authorization request with FERC to sell transmission services at negotiated rates. This request relates to a proposed approximately 500 mile long, +/- 600 kV high voltage, DC transmission line capable of delivering 3,500 MW of power. In its November 8 Filing, Clean Line made several unsupported claims in regards to the project. On November 29, 2011, IPL filed a Motion to Intervene and Comments in FERC Docket No. ER12-365-000. IPL is opposed to the project that Clean Line has put forth due to the limited information that has been provided and an apparent lack of due diligence into the project's potential affects. This current void of information prevents IPL from arriving at an informed decision or supportive stance with the project. IPL's Motion in FERC Docket No. ER12-365-000 is provided as Attachment A.

Rock Island Clean Line

Dec. 5, 2011 reply comments: pp. 1-17, Exhibits A through D

Clean Line provided responses to several commenters in this docket.

Environmental Group: The Environmental Group poses several questions. The first question is: Will any of the lines currently contemplated prolong the life of any coal plants in Iowa or beyond? Clean Line's business model is to sell line capacity to developers or purchasers of new renewable generation built in response to the transmission capacity created by our line. O'Brien County will be the windward endpoint because it is in the geographic center of Iowa's best wind resources. Also, Clean Line will be able to tap into an existing 345 kV line in O'Brien County to ensure a robust conversion process. It is expected that primarily wind farms will connect to the converter station. Coal plants in Iowa are in utility rate-base, it is unclear how it would be prudent for a rate-based plant in Iowa to reserve firm capacity on the Clean Line to export energy to PJM. Use of Clean Line by existing hydro, nuclear, coal, gas, and wind plants in MISO and Western Area Power Administration system would likely be via secondary capacity markets (when wind farms are not using their capacity). It is possible for an existing coal plant to build a new interconnection to Clean Line, but it is unlikely a new interconnection will be built for use in the secondary market only.

The second question posed by the Environmental Group is: Could construction of the lines be avoided by increasing energy efficiency and demand response programs at a lower cost? Clean Line is expected to transmit over 15,000 GWh per year of location-constrained renewable resources to far away markets. While increased use of energy efficiency and demand response might allow some modest increase in available transfer capacity for renewable energy from Iowa to eastern markets and can certainly be studied by Iowa policymakers, there is no credible plan or method to allow the export of 15,000 GWh per year of renewables on the existing transmission grid in Iowa. The existing transmission grid in Iowa was built primarily to help local generation serve local customers. Transmission of wind energy across long distances allows for the natural geographic variability of wind to reduce wind integration costs through the blending of distant and low-correlated wind resources. Demand response programs generally exist to shave peak demand usage, especially during periods when the transmission system is overstressed, and to avoid the use of more expensive peaking power. The integration of clean, renewable energy resources will help diversify our country's generation fleet and also provide the opportunity to retire older, less efficient fossil plants that are currently providing the energy supply for that portion of demand that is not able to be responsive. Demand response and energy efficiency programs are not a replacement for, but are complementary to, transmission infrastructure investments that support an increase in penetrations of renewable energy sources.

The third question posed by the Environmental Group is: Do transmission proponents intend to engage stakeholders in the planning, siting, and routing processes beyond the meeting and notice requirements of 199 IAC 11.4-11.5? Clean Line's preferred route development process, including extensive public, government agency and non-governmental organizational outreach, is considerably more extensive than what is required under Iowa law. The process consists of four key stages of development: project area stage, a study corridor stage, a route alternative stage, and the final selection of the preferred route, with appropriate outreach and data collection efforts at each stage. At the initial project area stage, Clean Line reached out to state and county agencies, conservation organizations, local planners, engineers, and conducted numerous community roundtable meetings to gather data about areas of concern and areas of opportunity related to siting. With all of that input, Clean Line developed draft study corridors, which sought to exclude, to the best extent possible, key areas of concern. These study corridors, typically three to ten miles wide, were then made fully public and available for review and comment by any party. Clean Line hosted 20 open houses across Iowa to introduce the project and collect feedback. Clean Line has now developed alternative routes, typically each half a mile in width, and has made these much narrower alternative routes available to governmental agencies and various other organizations for their review and input. To avoid running afoul of Iowa regulations restricting negotiations with actual route landowners until after the official informational meetings are held, these alternative routes have not been made available to the general public; this is in contrast to Clean Line's Illinois process, where the alternative routes have been made available to the general public at this stage. Clean Line believes that the extensive and transparent process it has conducted is the most reasonable method to select a preferred route for the project.

IAMU: For high-voltage DC merchant transmission proposed by WOR and by Clean Line, IAMU was concerned that the analyses does not included costs for the lower-voltage facilities that will also be needed and the DC plans needs to go through the MISO MTEP process. Clean Line clarifies that it is appropriately engaged in the MTEP process. Clean Line will be studied in MTEP 2012 under a "no harm study." Interconnection studies that have progressed within PJM will require coordination with MISO and these discussions will ultimately lead to the "no harm study." A 345 kV collector system will be built by either Clean Line or its customers to ensure a robust connection for wind plants trying to interconnect to its western converter station. Lower voltage lines built to route power from these wind plants to our collection points will be permitted and built exclusively for generation access to the converter station. Clean Line has no current intention to seek, cost allocation by MISO for these radial lines. Clean Line's customers would bear the costs of the lower voltage radial facilities both directly in their project costs and/or in Clean Line's tariff. If RTO rules regarding inter-regional cost allocation change, Clean Line reserves the right to reassess its business model.

IPL: IPL raises two basic issues in their comments. Should MISO assume functional control and cost allocation of Clean Line? Clean Line project is in the PJM merchant transmission queue and plans to deliver, in the normal operation of the line, exclusively to PJM (although the line would, for emergency operations or general reliability purposes, have the significant and valuable ability to reverse the direction of flow to the West, into MISO, if needed in an emergency). It is expected that PJM will be selected to operate the Clean Line. The ultimate decision will be the result of discussions between Clean Line, MISO and PJM that have yet to occur and cannot be fully predicted. Clean Line agrees with IPL in that MISO's functional control over the project would only make sense if benefits to the MISO footprint are in excess of the additional costs associated with MISO's functional control.

Regarding MISO cost allocation methods, Clean Line does not believe that the Clean Line DC project itself would be selected by MISO for final approval as an MVP. Clean Line has not sought, and does not currently intend to seek, cost allocation by MISO for the project in either the MVP or the MTEP process. If, in the future, MISO's rules regarding MVP designation change, or if rules regarding inter-regional project cost allocation evolve under FERC Order 1000, then Clean Line reserves the right to reassess its business model and potentially to seek cost allocation to MISO, if some portion of the benefits of the project to MISO are found to meet or exceed appropriate benefit/cost ratios. A recent PJM white paper proposes a number of potential new approaches for its RTEP process that would move beyond PJM's traditional bright-line reliability and economic tests for transmission expansion projects. If changes are seriously considered for adoption by PJM, Clean Line will work to make sure that the competitive posture of merchant projects is in no way undermined by such developments, and would potentially seek to allocate costs to PJM when consistent with appropriate identified benefits.

Sierra: The introductory section of Sierra filing provides some supportive comments relevant to the purposes of the Clean Line project, in that additional transmission capacity in support of future renewable energy development is necessary in Iowa.

On November 9, 2011, Clean Line filed a request with FERC for authorization to sell transmission services at negotiated rates and to sell up to 75 percent of its capacity to anchor tenants, with the remainder being sold through an open season. Clean Line does not believe the preference for renewable energy to be unduly discriminatory. Clean Line notes that it has selected O'Brien County as the windward endpoint for our line because it is in the geographic center of Iowa's best wind resources, and this location will best facilitate the development of new high capacity factor wind generation, and thus effectively preference that energy resource. Sierra believes that Clean Line is not engaged in any regional planning at all with MISO and the Board should not approve transmission projects in Iowa that have not engaged in the MISO regional planning process.

The twice-stated assertion that Clean Line has not participated in the MISO planning process is simply incorrect as clarified in Clean Line's response to IAMU. FERC Order No. 1000 continues to provide the option for merchant transmission developers to participate in regional transmission plans. Merchants are required to provide data and project detail sufficient to determine that subject projects meet reliability criteria specified pursuant to Section 215 of the Federal Power Act.

Sierra also notes that DC projects should be treated differently than AC projects because of what they characterize as the "more limited nature of interconnections." Clean Line agrees that the limited nature of interconnections to a DC line, in the context of FERC open-access rules, is also what makes Clean Line merchant business model work by limiting free riders and allowing the discreet capacity customer model to function. If Clean Line is proposed as an AC project, it would be open to interconnections across Iowa and costs would be assigned to Iowans since a transmission network cannot exclude uses or users. Sierra also discusses AC versus DC merits.

Clean Line agrees with Sierra's final recommendation in this section – the Board should ensure that transmission lines constructed in Iowa are part of a well-designed and reliable electric grid that benefits renewable energy producers and consumers in Iowa. The "grid" is the key word here; the Board should make sure that the grid accomplishes both the mission of providing service to renewable energy producers and the mission of providing reliable and cost effective service to consumers in Iowa. This standard should not be the standard for each individual transmission project in Iowa. Individual projects may serve only one or the other of those purposes and still strongly support the public interest and need. Clean Line additionally contends that neither MISO or PJM nor the interconnecting utilities would ever enter into a transmission interconnection agreement that did not ensure a reliable grid.

Clean Line agrees that DC lines are complementary to, but not a replacement for, a robust AC system. Most economic means for moving large amounts of power long distances is most efficiently and reliably achieved with DC installations. Clean Line's model captures a very valuable and diverse resource in the lowest cost production areas through an AC collection system that gathers the resource at the converter station, thus eliminating the need for "expensive converter stations for each line." Interconnecting ability along a DC line is costly, but it is not technically infeasible. A DC line does help to protect the intermediate system from undue congestion, can provide stability benefits, and provide a controllable path for the resource to reach load. DC facilities can clearly be considered to be part of the "Smart Grid" of the future. This technology creates more advanced, higher paying jobs in the industry. Existing DC facilities have been operating for multiple decades and have, in many cases, received upgrades that have further improved their performance and value. This is unlikely in AC without the addition of new lines. Clean Line argues that the

determination of a “complementary” project needs to look at that particular project and not assume generalizations based upon certain aspects of the technology.

Clean Line finds some of the Sierra comments related to technology choice to be mutually inconsistent. The question again is whether the same tests should be applied to each individual project as are applied to an entire optimized grid system. It is the lack of high-capacity export lines that prevent the utilization of Iowa’s wind resource, not their potential presence. Just as Iowa’s corn, soy, and hog production are many multiples larger than Iowa’s consumption, and their economic value to the state is therefore dependent on the availability of export markets, so too is the economic value of Iowa’s wind resource dependent on export market availability. Improving access to export markets for wind is in the public interest. The new technologies for AC that are mentioned by Sierra do not, in fact, change the real power loss profile for AC transmission lines but rather perform functions to allow a more controllable flow of power and/or provide solutions to reactive power limitations. Similarly, due to the high cost of additional converter stations, and because Iowa’s most cost-effective wind energy resource is found in the northwest portion of the state, Clean Line finds no evidence to economically justify the addition of another converter station to the project.

Sierra appears to be encouraging the use of superconducting technology. Careful review of an article filed by Sierra reveals that the recommendation is actually for a 10 year U.S. Department of Energy research program, not for any requirements for immediate deployment for projects well into their development cycle. Sierra’s discussion of technology choice does not reference the clear land conservation benefits of DC technology, which allows for the utilization of a much narrower right of way than AC technology of similar voltage and transfer capability. Sierra argues that transmission siting should avoid or mitigate impacts to natural areas and wildlife corridors, and notes that Clean Line is making a “valid attempt” to avoid or mitigate environmental impact in the routing of our line. Clean Line appreciates the expression of confidence by Sierra.

Wind On Wires

Reply comments: pp. 1-3

The focus of these reply comments is in regards to comments submitted by the OCA in this docket. WOW respects the thorough analysis that the OCA undertakes in ensuring Iowa’s electricity customers benefit from affordable energy prices and believes that the Midwest region’s extensive planning process as well as MISO’s methodology in calculating the benefits and costs of new transmission is a valuable tool for Iowa and the entire region. MVPs that have been discussed in this NOI to date are the result of extensive, multi-year planning and analysis involving Governor’s offices, state regulators, utility experts, consumer advocates and many other stakeholders. The UMTDI was the result of

five states, including Iowa, recognizing the need to invest in and build new transmission in a coordinated way to ensure efficient investment, construction and operation. RGOS continued this work and has provided much of the foundation for projects being considered today. Over the past several years, nearly every state in the MISO footprint has implemented some type of Renewable Energy Standard, demonstrating a clear policy consensus for the region.

OCA raised concerns that the FERC approved cost-sharing mechanism for MVP projects would lead to inefficient and inappropriate build out of new transmission. Cost allocation for these projects has been studied in detail by various state commissions and utility experts from across the region. While consent among all the states was less than one hundred percent, the MISO proposal has been approved by FERC and in subsequent re-hearing proceedings has been found to be “just and reasonable.” While the cost of new transmission should be examined thoroughly, the Board should also pay particular attention to the benefits associated with the transmission build out. While MVP portfolio costs are estimated to be \$5.3 billion, it is important to consider the long-term benefits to the region from these projects. Modeling shows that the initial transmission investment will provide a significant return on investment. For Iowa, economic benefits of the MVP projects outweigh the cost by a factor ranging from 1.6 - 2.8. MISO studies show multiple regional benefits of the MPV projects including – improved reliability (mitigating violations), public policy benefits (enabling approximately 41 million MWh of renewable energy), economic benefits, qualitative benefits (resources including wind), and job creation benefits (up to 74,000 jobs, mostly in Iowa).

Attachment G

ACRONYM LIST

<u>Name</u>	<u>Acronym</u>
Alternating Current	AC
Ag Processing, Inc.	AGP
Utilities Board	Board
Cost Allocation and Regional Planning	CARP
Rock Island Clean Line LLC	Clean Line
Direct Current	DC
Duke-America Transmission Co.	Duke
The Environmental Law & Policy Center and Iowa Environmental Council	Environmental Group
Electric Transmission America, LLC	ETA
Federal Energy Regulatory Commission	FERC
Green Power Express	GPE
Gigawatt	GW
Hawkeye Land Company	Hawkeye
Iowa Association of Electric Cooperatives	IAEC
Iowa Association of Municipal Utilities	IAMU
Investor Owned Utilities	IOUs
Interstate Power and Light Company	IPL
ITC Holdings Corp.	ITC
ITC Midwest	ITCM
Kilo Volts	KV
Kilowatt Hours	kWh
Load Serving Entities	LSEs
MidAmerican Energy Company	MEC
Midwest Independent System Operator	MISO
Midwest Power Transmission Line	MPTL
Missouri River Energy Services	MRES
MISO Transmission Expansion Plan 2011	MTEP
MISO Transmission Expansion Plan	MTEP11
Multi Value Projects	MVPs
Megawatt	MW
Megawatt hours	MWh
North American Electric Reliability Corporation	NERC
Notice of Inquiry	NOI
Operations and Maintenance	O&M
Open Access Transmission Tariff	OATT
Iowa Office of Consumer Advocate	OCA
Organization of MISO States	OMS

Planning Advisory Committee	PAC
PJM Interconnection	PJM
Regional Expansion Criteria and Benefits Task Force	RECBTF
Regional Generator Outlet Study	RGOS
Return on Equity	ROE
Resale Power Group of Iowa	RPGI
Renewable Portfolio Standard	RPS
Regional Transmission Organization	RTO
Iowa Chapter of Sierra Club	Sierra
Transmission Dependent Utilities	TDUs
Upper Midwest Transmission Development Initiative	UMTDI
Wind on Rails Inc.	WOR
Wind on the Wires	WOW
ZAM Ventures, L.P.	ZAM Ventures
ZBI Ventures, L.L.C.	ZBI Ventures